DOCUMENT RESUME

ED 061 298 TM 001 321

AUTHOR	Stufflebeam, Daniel L.; And Others
TITLE	Design for Evaluating R&D Institutions and Programs.
INSTITUTION	Ohio State Univ., Columbus. Research Foundation.
SPONS AGENCY	National Center for Educational Research and Development (DHEW/OE), Washington, D.C.
BUREAU NO	BR-1-0857
PUB DATE	31 Aug 71
GRANT	OEG-0-71-4588
NOTE	194p.
EDRS PRICE	MF-$0.65 HC-$6.58
DESCRIPTORS	Decision Making; Evaluation Criteria; Flow Charts; Measurement Instruments; *Models; Organization; *Program Evaluation; *Program Proposals; *Project Applications; Systems Approach; *Systems Development

ABSTRACT

This report submitted by Advocate Team No. 1 to the U.S. Office of Education, Division of Research and Development Resources (formerly Division of Manpower and Institutions) presents a proposed evaluation system for R&D institutions and programs. It includes: (1) an organizational framework within which the evaluation system could function; (2) procedures to be followed in implementing the evaluation system; and (3) a set of criteria and related guidelines for use in applying the proposed evaluation approach. (Author/MS)

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

ED 061298

Design for Evaluating
R&D Institutions and Programs

Advocate team report
Daniel L. Stufflebeam, Chairman
Henry M. Brickell
Egon G. Guba
William B. Michael

TM 001 321

A Report Presented to the Division of Research and Development Resources • National Center for Educational Research and Development • U.S. Office of Education • Project No. 1-0857; Grant No. OEG-0-71-4558 • August 31, 1971

Project No. 1-0857
Grant No. OEG-0-71-4558

Advocate Team Report

Daniel L. Stufflebeam, Chairman
Henry M. Brickell
Egon G. Guba
William B. Michael

August 31, 1971

U. S. Office of Education
National Center for Educational Research and Development
Division of Research and Development Resources

Contributors to the Report:

Design Team

Daniel L. Stufflebeam, Chairman
The Ohio State University

Henry M. Brickell
Institute for Educational Development

Egon G. Guba
Indiana University

William B. Michael
University of Southern California

Consultants

Max G. Abbott
Center for Advanced Study
in Educational Administration

Robert S. Randall
Southwest Educational
Development Laboratory

Project Manager

Diane L. Reinhard
The Ohio State University

Project Monitor

Ray Rackley
U.S. Office of Education

Editor

E. Joseph Schneider
Information Office for CEDAR

Conference Secretary

Jeanne A. Thissen
The Ohio State University

Acknowledgments:

This report reflects the cooperation and hard work of a team of talented individuals. It is a privilege to acknowledge their contributions.

Henry M. Brickell, Egon G. Guba, and William B. Michael served on the design team, and Max G. Abbott and Robert S. Randall were consultants to this team. Given a difficult charge and severe time constraints, the design team and the consultants responded well. They quickly developed a spirit of cooperation, analyzed the problems to be solved, conceptualized the proposed solutions, and developed the contents of this report. My thanks to each of them.

Diane Reinhard (manager of the sponsoring project); Ray Rackley (USOE monitor); Joe Schneider (editor); and Jeanne Thissen (conference secretary) provided superb support services. On behalf of the design team and consultants I wish to thank each support person for his excellent assistance.

D L S

Table of Contents

Chapter I - Introduction and Overview 1
  Maturity Model and the Ten Evaluation Types. 2
  Claims for the Proposed Evaluation System. 5
  Overview of the Organizational Framework for the Evaluation System 7
  Overview of the Proposed Model for Evaluation and Decision-Making 10
  Overview of Criteria to be Applied in the Evaluation of DRDR Programs. 12

Chapter II - A General Systems Model for Application of the Criteria. 15
  Evaluation Requirements of the Ten Decisions 15
  General System Model 17
  Description of Flow Chart. 18

Chapter III - Illustrations of the General System Model 25
  Application to Decision 2 - New Institution Review 25
  Application to Decision 4 - Maturity Review. 28
  Application to Decision 6 - Program Plan Review. 31
  Application to Decision 9 - Program Review 33

Chapter IV - Decisions, Criteria, and Guidelines. 36
  Analysis of How Criteria Relate to the Ten Decisions 37

Chapter V - Special Procedures. 49
  Expert Judges. 50
  Instrumentation and Quantitative Procedures. 52
    Development and Scoring of Evaluation Instruments 53
    Alternative Approaches to Determining Comparative Judgements. . 55
  Procedures for Site Reviews. 57
  Evaluation Auditor 58

Chapter VI - Description of the System. 65
  Institutional Roles. 66
    DRDR Decision-makers. 66
    DRDR Evaluators 70
    Expert Judges 81
    External Technical - Services Agency. 83
    Evaluation Auditors 85
    Institutional Decision-Makers 86
    Institutional Evaluators. 87
  DRDR Evaluation Office 89
    Institution Liaison Specialist. 90
    Audit Liaison Specialist. 91
    Technical - Services Liaison Specialist 91
    Associate Director for Evaluation 92
  Funding of the Proposed Evaluation System 93

Chapter VII - Recommendations 100

Appendix A - Guidelines for Applicants and Judges 102

Appendix B - Relationship Between Selected Evaluation Factors and Support-Policy Decisions 184

Figures

		Page
Figure 1	System Model Flow Chart	19
Figure 2	Types of Evaluation Required for each Decision Point	39
Figure 3	Proposed Organizational Chart	90

Tables

Table 1	Basic Criterion Format	38
Table 2	Master List of Criteria Cross Referenced to the Ten Support Policy Decisions	41-47
Table 3	Man-Days of DRDR Evaluators and Expert Judges Needed	94
Table 4	Man-Days for an Assumed Typical Year	96

1

Introduction and Overview

This report responds to a request from the Division of Research and Development Resources (DRDR) of the U. S. Office of Education's National Center for Educational Research and Development. DRDR was seeking a design for evaluation that will enable it to make responsible decisions regarding institutions and programs it supports. The authors of the report met August 5 through 9, 1971 to analyze DRDR's request and to prepare the report.

The evaluation system developed in response to the request meets five major DRDR specifications. First, it focuses on the ten decisions explicated in DRDR's New Support Policy (Frye 1971). Second, it responds to five specified problems. Third, it presents an organizational framework within which the proposed evaluation system functions. Fourth, it projects the procedures to follow in implementing the new system. And fifth, it supplies a set of criteria and related guidelines to use in applying the proposed evaluation approach to the ten specified decisions. This chapter, then, provides overviews associated with these five DRDR specifications.

Maturity Model and the Ten Evaluation Types

When this Project Group met to respond to DRDR's charge, the members reviewed the new institutional policy of the division as summarized in the working paper entitled "DMI Institutional Support and Evaluation Policy," dated 3 June 1971. The paper posited a "maturity model" that included ten decision-points calling for evaluation.

1. Award of grants for planning new institutions. Planning-grant proposals will be solicited from groups and agencies interested in founding new educational institutions. Such a planning-grant proposal will be evaluated prior to a funding decision.

   The key question to be answered in this evaluation is: Should the request for a planning grant for a new institution be funded?

2. Award of operational grant for starting new institutions. The award of a planning grant will lead to the development of a full-scale institutional proposal. The latter will be evaluated between three and six months after the termination of the planning period. If accepted, the proposal will provide funds to establish a new institution.

   The key question is: Should a given proposal to start a new institution be funded?

3. Approval of a new institution program plan. After a development period of one to two years, the new institution will be required to submit a report summarizing its organization and defining its mission. At least one program plan must be developed.

The key question is: Is the basic program plan of a given institution satisfactory?

4. Certificating a new institution's management capabilities. During this phase the new institution will be required to bring one or more program plans into full operation. After approximately two years a report will be required to determine if the institution is mature enough to continue with program support.

The key question is: Is the institution capable of managing its basic program plan?

5. Award of grants for planning new programs. An institution that has successfully completed its maturity review will be classed as a "mature institution" and will be eligible to apply for one or more development grants for new programs. (Already mature institutions may submit development grant-proposals without going through decision points 1 - 4.) The proposals for such program-development grants will be evaluated.

The key question is: Should a given developmental grant for a new program be funded?

6. Approval of Program Plans. The award of a new program-development grant will result in the planning of a new program that will be evaluated.

The key question is: Should the Office of
Education commit itself to support the proposed
program plan?

7. Milestone Review. A funded program will have specified milestones at which certain phases of the program work must be completed. As these milestones are reached, a report will be submitted for evaluation. This evaluation, unlike those at earlier or later stages, will be made by a review team appointed by the institution rather than by OE; however, the information collected by the team will be shared with DRDR.

The key question is: Are significant milestones
in the program plans being reached, on time, and with
satisfactory quality?

8. Modification of DRDR program Support for Mature [illegible]titution Motivated by Special Circumstances. Special circumstances, e.g., the departure of key leadership personnel, that appear capable of altering the institution's capability to continue its programs, may prompt DRDR to investigate. A special report, relating to the circumstances, may be required for evaluation by DRDR.

The key question is: Do current circumstances
of the programs or institution require redirection
or changes in OE support?

9. Program Outcome Evaluation. When a program concludes, its final outcome will be evaluated.

The key question is: Did the program reach its objective?

10. Budget and Contract Review. This review differs from the previous nine because it occurs annually as a function of the HEW funding cycle. Its purpose is to determine whether or not adjustments should or must be made in the institution's funding pattern.

The key question is: With given funds each year, how should any given program be adjusted, stretched, or compressed?

Decision points 1 and 5 relate to planning activities; decision points 2 and 4 to institutional factors (initiate, adjust); decision points 3, 6, 7, 8, and 9 to program factors (initiate, adjust, terminate); and decision point 10 to annual-budgeting factors. Decision points 4, 6, and 8 probably are the most critical. Decision points 1, 2, 3, and 5 require only minimal evaluation activity by DRDR and 10 is part of the annual budgeting process.

Claims for the Proposed Evaluation System

The authors of this report contend that their proposed evaluation system, together with the new DRDR Support Policy, comprises a sound strategy for overcoming five problems that plague attempts to evaluate and make decisions about institutions and their associated programs.

Presently, it is difficult to recoup and redirect Office of Education funds. Consequently, new institutions or programs to address emergent or new problem areas are unavoidably denied. The new evaluation and decision-making system will overcome this problem by determining early whether an institution is a good risk to conduct sound research and development work - by setting milestones, by requiring final evaluation for programs, and by insuring that milestones and terminal evaluations are regarded with importance.

The second problem involves evaluations. They often lack the credibility needed to support decisions to terminate programs or institutional support. The proposed evaluation system attempts to overcome this by providing for (1) a careful selection of judges; (2) judges trained to make their evaluation based on data produced from institutions and programs; (3) three or five judges who make independent judgments in reference to the same set of data; and (4) an audit of evaluation procedures and results that provides for the defensibility of decisions based on those evaluations.

A third problem has resulted because of OE's inability to rank institutions and/or their programs. The proposed system provides explicitly for a rank ordering of institutions and programs according to a psychometric procedure to be administered by an external technical service agency.

A fourth problem involves the confusion regarding nurturent and evaluative roles with respect to administering institutions' programs. The proposed system distinguishes sharply between these roles and calls for a separate evaluation office that administers the evaluative roles.

The fifth problem is the ill-defined criteria for evaluating institutions and programs. This report lists well explicated criteria. And the report specifies which of the criteria applies to which of the decision situations. Also, the criteria are presented in the appendix in the form of specific guidelines for evaluations associated with each of the 10 decisions.

Generally, then, the evaluation system proposed responds to DRDR's charge.

Overview of the Organizational Framework for the Evaluation System

It is assumed that the implementation of the proposed evaluation designs depends on the following seven classes of personnel:

OE decision-makers. Certain key OE personnel have the legal responsibility to propose decisions contingent on each of the ten evaluations. These decisions, which must be serviced by evaluation information, are best reflected in the ten questions posed for each of the evaluation points described above. Positive answers to the questions result in new or continued funding; negative answers result in institutional or program recycling, or termination of funding.

DRDR evaluators. The decisions to be made are serviced by evaluation information. It is the responsibility of DRDR evaluators to manage the evaluation and to interpret and report their findings to the

DRDR decision-makers. (Much of the evaluation information, incidentally, is generated by the institutions being evaluated, outside judges, and by analysis performed by outside agencies.)

Institutional decision-makers. A variety of decisions regarding program management will be made at the institutional level by institutional decision-makers. Planning decisions (e.g., what needs, problems, or opportunities shall become the focus of an institutional program?), structuring decisions (e.g., how shall a given need, problem, or opportunity be addressed?), implementing decisions (e.g., are the means projected actually in use and being applied according to specifications?), and recycling decisions (e.g., should a program component be recycled or terminated?) must be made and each must be serviced by an institutional evaluation mechanism.

Institutional evaluators. Large, local evaluation staffs will be required to provide institutional decision-makers with a variety of evaluative information. These local staffs also must service certain DRDR needs by collecting other information specifically required by DRDR and/or by aggregating local data for DRDR purposes.

Expert judges. DRDR will not have an evaluation staff of sufficient size to perform all aspects of the evaluations; moreover, such an evaluation, even if possible, would lack credibility both with the institutions being evaluated and with key outside reference groups (e.g., USOE, HEW, the Congress, and concerned publics). Hence, arrangements will have to be made to provide expert judges who can participate independently in the evaluation process. Such judges will be required for two purposes: to evaluate the proposals and/or reports submitted for various evaluation purposes (the ten decision points) and to verify and extend the information contained in such proposals and/or reports through site visits. Site visits may not be needed at decision points 1, 2, 5, 7, and 10 (although an institutionally sponsored site visit may occur at point 7).

Contract Service Agents. Certain services requisite to evaluation performance will have to be provided by outside service agencies or contractors. For example, consultants may be needed to engage in continuous study, refinement, and extension of the program guidelines; computer services will be required for certain data-analysis tasks; analyses concerned with determining the marketability of products resulting from funded programs may be needed; and specialists may be required to assist in personnel training.

Perhaps the major outside service required will be an analysis agent to assist in ranking institutional proposals and reports for quality. As will be noted briefly in the following chapter and described in detail in chapter three, proposals will be given comparative rankings for quality at two different points in the review process. These rankings will be developed by the application of psychometric techniques dealing with comparative judgments. This task will be difficult to accomplish without the assistance of an outside contractor having the necessary technical expertise and computer sophistication.

Evaluation auditors. Despite all efforts to maintain integrity, an evaluation carried out solely by employees of DRDR, the local institutions, and their agents may lack credibility with certain key audiences, e.g., the Congress. To provide such credibility, evaluation auditors -- nationally known figures whose integrity is beyond question -- will be employed to audit, on a sampling basis, evaluations of each of the ten types. In addition, they will attest both to the soundness of the procedures employed and the validity, reliability, and objectivity of the conclusions generated.

A fuller explication of the organizational framework can be found in chapter six.

Overview of the Proposed Model for Evaluation and Decision-Making

The proposed evaluation designs are all based (with minor variations) on a process model involving DRDR and institutional evaluators, expert judges, and evaluation auditors, as follows:

-- Guidelines for proposals and reports, as required in the ten evaluations, are distributed by DRDR.

-- Institutional decision-makers, supported by their evaluation staffs, prepare the required reports and/or proposals.

-- DRDR decision-makers establish panels of expert judges and evaluation auditors that can be assigned, on a systematic basis, to particular evaluations.

-- Proposals or reports are received by DRDR evaluators who give them an initial check to ascertain that all required information has been included. Documents failing this test are recycled to the institution for revision.

-- The factual information contained in the reports and/or proposals is checked for validity by a DRDR evaluator with some experience with the institution in question. The evaluator notes discrepancies for later referral to site reviewers who can make an onsite verification. Alternatively, in less important cases, the evaluator may make a verification site visit himself.

-- Proposals and/or reports are submitted to a group of independent judges who independently evaluate the documents on the basis of criteria specific to the decision type (see chapter two for an overview of these criteria). Documents failing this test are rejected.

-- Proposals and/or reports passing the expert-judge check are ranked by the analysis agent on the basis of a metric relating to their relative quality. (This metric, explicated in a later chapter, depends on a method of comparative judgments drawn from psychometric theory.)

-- Proposals and/or reports ranked "sufficiently high" on the preceding step are resubmitted to the expert judges that have been transformed into site reviewers. A further onsite evaluation is made in terms of criteria identical to those utilized for the reading review. Proposals and/or reports failing this step are rejected. (Note: This onsite evaluation does not occur in decision points 1, 5, 7, and 10, although decision 7 involves a site visit by a panel of experts appointed by the institution.)

-- Institutional requests passing the site review check are ranked by the analysis agent on the basis of relative quality using the same metric identified above.

-- Institutional requests ranked "sufficiently high" on the preceding step are approved for funding.

-- The entire process summarized above is monitored on a sampling (probabalistic) basis by an evaluation auditor who can attest to its validity, reliability, and objectivity.

A fuller explication of the model for evaluation and decision-making can be found in chapter two. Exemplar applications for decision types 2, 4, 6, and 9 can be found in chapter three.

Overview of Criteria To Be Applied in the Evaluation of DRDR Programs

Each of the ten evaluation types posited in this paper services a decision point at which certain institutional or program-related decisions are made. It is clear that these decisions cannot be made in the absence of specific criteria; consequently, one of the Advocate Team's assigned tasks was to generate a listing of criteria for this purpose.

By an iterative process, 357 candidates for criterion status nominated by this Advocate Team were reduced to a taxonomy of ten major categories.

-- Significance of focus (institutional mission or program goal)

-- Significance of anticipated outcomes (demonstrated improvement in reading ability of disadvantaged five-year olds)

-- Uniqueness (concentration of r & d on neglected educational problems or concentration on solution to geographically specific problems)

-- Viability (institutional or program)

-- Planning and evaluation adequacy

-- Program balance (between research and development)

-- Adequacy of program elements (e.g., objectives, procedural design, and appropriateness of personnel)

-- Cost (appropriateness of personnel and time allocations)

-- Economic efficiency (cost-benefit considerations)

-- Potential for outside support (e.g., service agencies, other funding sources)

Each of these categories is broken into several subcategories (See chapter four.)

Inspection of the categories indicated two basic dimensions along which it was useful to array the criteria: relevance to institutions, on the one hand, as against relevance to programs, on the other; and relevance to the future (prospective view, based on proposals), on the one hand, and relevance to the past (retrospective view, based on reports), on the other. Using these two dimensions, four sets of criteria relating to each of the four types were arranged: prospective institutions, prospective programs, retrospective institutions, and retrospective programs. Moreover, it was possible to relate each of the ten types of evaluation (except number 10, that is mixed) to one of these four criterion types.

The complete array of criteria appears in chapter four. The criteria are applied in guidelines, to be used by DRDR, at the end of this report.

The remainder of this report explicates and illustrates the evaluation system. Chapter two presents the basic model for applying the evaluative criteria; chapter three illustrates how the model applies to decisions 2, 4, 6, 7, and 9; chapter four presents and analyzes criteria to be used in applying the proposed evaluation system to the ten specified decisions.

Chapter five includes four sets of special procedures. The first suggests procedures for selection, training, and assignment of expert judges. The second recommends instrumentation and quantitative procedures for obtaining and analyzing comparative judgments. The third presents procedures for site reviews, and the fourth gives recommendations for the evaluation audit.

Chapter six, a description of the evaluation system, considers institutional roles, suggestions for organizing DRDR, and a discussion of funding of the proposed evaluation system. Appendix A provides guidelines to be used by institutions and judges in preparing the basic data needed to support the Maturity Model's ten decisions.

The final chapter provides recommendations. An overall chart depicting the relationship between selected factors in the proposed evaluation system and the ten support policy decisions is located in appendix B. This chart should be folded out at this point for ease of reference during the reading of the body of the report.

II

A General System Model for Application of the Criteria

This chapter describes the system model devised to service the ten support policy decisions. The model applies to all ten of the decisions, but it is responsive to the idiosyncrasies of each. And it is useful to DRDR evaluators and decision-makers because it adheres specifically to the new DRDR support policy.

Evaluation Requirements of the Ten Decisions

Examination of the ten decisions reveals different kinds of primary concerns. Decisions 1, 2, and 4 primarily address questions about an institution; e.g., its management and personnel, with lesser attention given to its program development activities. Decisions 3, 5, 6, 7, 8, and 9 primarily concern programs and their development, with somewhat less attention given to the institution and its management capabilities. In these latter decision situations the management is considered only as it affects or is perceived to be the cause of the difficulty in program development. Of course decision situation ten differs from the others because it concerns an annual budget review conducted by the DRDR program monitor.

Other differences also are apparent. Some of the decisions are more important (e.g., 2, 3, 4, 6, and 8) because they result in more significant commitments to funding. Another difference concerns the complexity of the decision and the data base required to make it. For example, decisions 1, 2, 3, and 5 require considerably less information and judgment than do the others. And decisions 7 and 10 require less effort on the part of DRDR staff than do the others. However, in the case of decision 10, a funding crisis at the USOE level may force serious cuts to be made in DRDR-funded programs at the time of annual funding decisions. If the crisis occurs, the evaluation unit will draw information about milestone reviews from its files and supply it to the division's decision-makers. Similarly, entries in the files regarding intervention reviews will be gathered and summarized for the decision-makers. Information on the success or failure of programs to reach their milestones and on the ability of institutions to weather intervention reviews will be the influencing factor determining the allocation of the limited funds for the year ahead.

Decisions 4, 6, and 8 are the most complex and imply greater commitments than do the others; therefore, the system calls for five judges to review the documents and to make site visits. Decisions 2 and 3 (planning grant review and new program-plan review) are next in terms of complexity and commitments; therefore, three judges to review documents and to make site visits are proposed. decision 9, which concerns the outcomes and attainment of objectives of a program, requires three judges to review documents that give evidence of attaining objectives. However, no site review is needed. A three-member judge panel is proposed for review of documents for decisions 1 and 5 that entail planning grants.

General System Model

The system depends on interested parties or institutions furnishing information to DRDR in response to clearly understood guidelines. DRDR, after checking the content, will utilize expert judges to validate facts and rate quality. These assessments, then, will be submitted to an analysis system performed by an outside contractor to rank order the results and/or proposals.

The flow chart of the model (on page 19) and subsequent step-by-step description cover all decision situations in the system. For the more complex decisions requiring site visits, the full model is used. For other decisions, where no site visits are projected, only the first two stages of the model are utilized.

The model calls for three stages in the decision process. The first stage (1.0-1.3) entails a content check by the DRDR evaluator and a recycling (if necessary) for more information. The second state (2.0-2.11) utilizes a systematic procedure to select and assign judges to read documents and make assessments.

The assessments are then utilized in an analysis system to rank order the results and to make decisions based on their relative quality. For decisions 1, 5, and 9 the process terminates and commitments are made at this point. For other decisions (2, 3, 4, 6, and 8) the process continues through stage 3 (3.0-3.9). During the third stage the expert judges, assigned to assess the quality of written documents, make site visits and further validate and assess the quality of the proposals. These assessments then are submitted by contract to an analysis system that results in a rank order for each decision situation. Stratifications within them occur where different programs are involved. Again, a rank ordering of relative quality is determined and becomes the basis for decisions about further commitments.

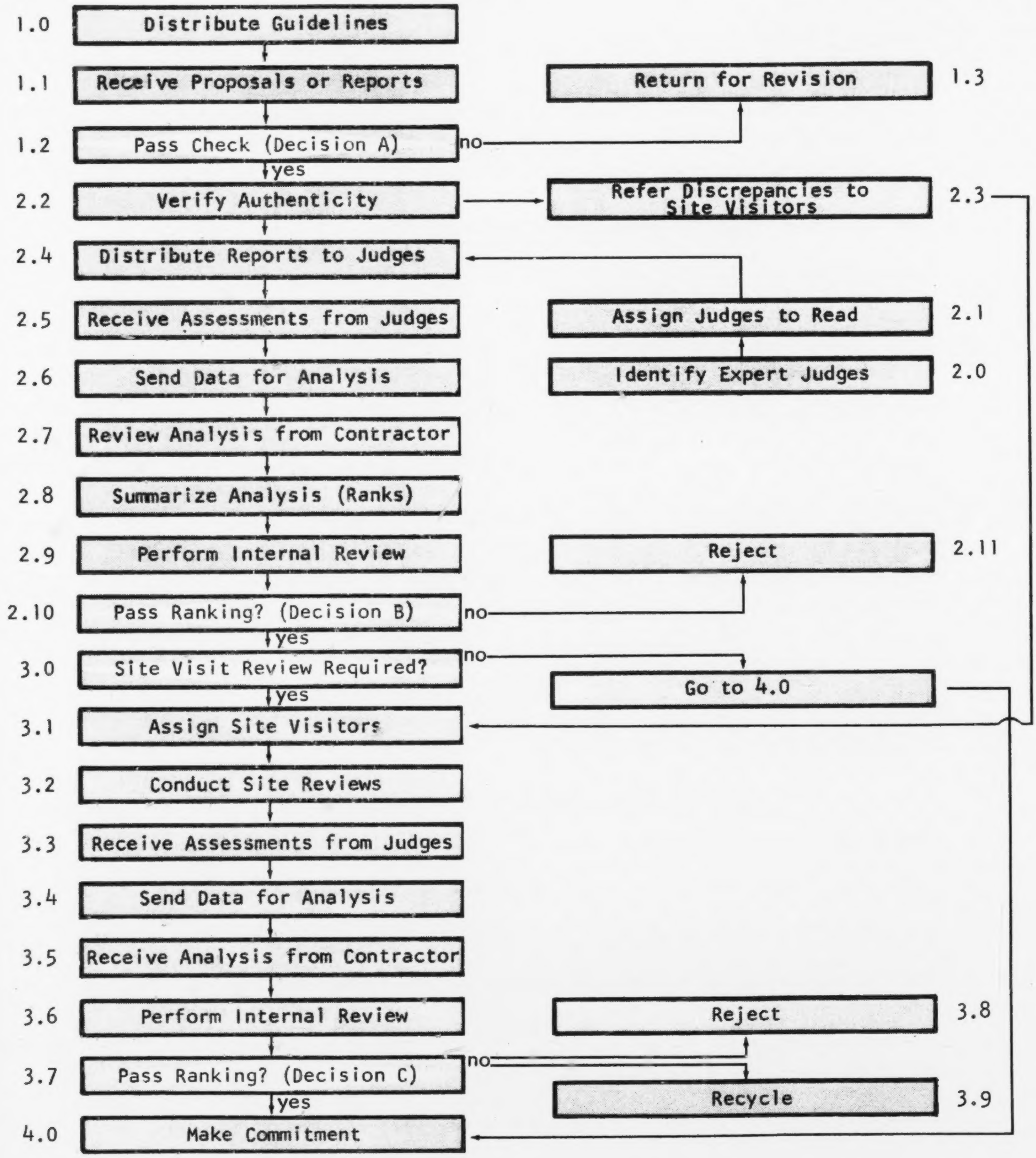
Although slight modifications are required for decision 7 - where the mature institution conducts its own program-milestone review and reports the results to DRDR - and decision 10 - where DRDR conducts a budget review and adjustment - the system is adequate to cover needed information, assessment, and analysis to make the ten decisions indicated in the mature institution policy.

Description of Flow Chart

Following is a step-by-step explanation of the system model flowchart:

1.0 Distribute guidelines. Guidelines are developed based on criteria for the decision situation and notice of

FIGURE 1
SYSTEM MODEL FLOW CHART



1.0 Distribute Guidelines
1.1 Receive Proposals or Reports
1.2 Pass Check (Decision A)
no
Return for Revision 1.3
yes
2.2 Verify Authenticity
Refer Discrepancies to Site Visitors 2.3
2.4 Distribute Reports to Judges
2.5 Receive Assessments from Judges
Assign Judges to Read 2.1
2.6 Send Data for Analysis
Identify Expert Judges 2.0
2.7 Review Analysis from Contractor
2.8 Summarize Analysis (Ranks)
2.9 Perform Internal Review
Reject 2.11
2.10 Pass Ranking? (Decision B)
no
yes
3.0 Site Visit Review Required?
no
Go to 4.0
yes
3.1 Assign Site Visitors
3.2 Conduct Site Reviews
3.3 Receive Assessments from Judges
3.4 Send Data for Analysis
3.5 Receive Analysis from Contractor
3.6 Perform Internal Review
Reject 3.8
3.7 Pass Ranking? (Decision C)
no
Recycle 3.9
yes
4.0 Make Commitment

Key

Decision A 1.0-1.3 (screen for content)
Decision B 2.0-2.11 (evaluation of written documents)
Decision C 3.0-3.8 (evaluation of observed capabilities)

availability is sent to interested parties along with a date for response to guidelines (if appropriate). Guidelines then are sent to the parties requesting them. (Prototype guidelines appear in appendix A.)

1.1 Receive reports or proposals. Proposals or reports come to the DRDR monitor where they are numbered consecutively or otherwise identified consecutively on a list.

1.2 Make decision A. The DRDR evaluator checks with guidelines to determine if content of each proposal is sufficient (only presence or absence of required information is noted). If required information is present in the proposal or report, the report goes to section 2.2. If information is missing, the report is returned to the group or institution.

1.3 Return for revision. Proposal or report is returned with missing information noted. Institution or group has one week to revise and resubmit the document.

2.0 Identify expert judges. It is assumed that expert judges have been identified and classified into different areas of expertise. From this pool, DRDR officials identify expert judges according to a procedural plan (specified in Chapter V). The appropriate number of judges (depending on the number and nature of decisions to be made) is identified (as specified elsewhere) and the DRDR evaluator determines their availability for both reading proposals or reports and for making a site visit if necessary.

2.1 Assign judges. DRDR assigns judges according to a procedural plan (specified in Chapter V).

2.2 Verify authenticity. The DRDR evaluator considers factual information in the report or proposal and verifies its accuracy. This may include discussion with the DRDR program monitor, phone calls to the institution or group concerned, or a site visit. If the decision to be made calls for a follow-up site review, then any questionable information may simply be noted and held for the site reviewers. However, if no such follow-up site review is intended, the evaluator must make an effort to validate the information involved - even if it requires him to conduct a site visit.

2.3 Refer discrepancies to site visitors. Any questionable information will be noted and held aside by the DRDR evaluator to call to the attention of the site reviewers.

2.4 Distribute reports to judges. The DRDR evaluator sends each reader four items.

a. The report or proposal

b. Guidelines (criteria) for judging the report or proposals (see appendix A)

c. Instruments (Guidelines to serve as the basis for instruments are included in the appendix A.)

d. Instructions for completing the instrument and the date for returning it

2.5 Receive assessments from judges. Assessments received from the judges are checked and analyzed by the DRDR evaluator.

2.6 Send data for analysis. Instruments are organized according to stratifications, as explained in procedures for analysis, and sent to the contract service agent.

2.7 Receive analyses from contractor. Contractor sends analyses to DRDR evaluator, who organizes and checks to see if all are returned.

2.8 Summarize analyses (ranks). The DRDR evaluator summarizes the rank orderings within each stratification and prepares them for the internal review.

2.9 Perform internal review. DRDR decision-makers meet and review the data presented by the evaluator on each set of decisions within each stratification cluster. Policies and constraints are considered in preparation for making the decisions.

2.10 Make decision B. Decisions are made concerning each decision situation and rejected proposals or reports are classified and collected.

2.11 Reject. DRDR decision-makers notify groups or institutions of the rejection of their proposal.

3.0 Site review required. Proposals or reports that survive are studied to determine the necessity of a site review. This is the only place that indicates site reviews are prompted as opposed to being automatic. Those requiring a site review are prepared to go to 3.1. Those not requiring further review go to 4.0 and the successful groups or institutions are notified of the funding decision.

3.1 Assign site visitors. DRDR assigns site visitors, previously used as readers, to visit the appropriate sites. The judges who reviewed an institution's report or proposal are assigned to the same institution for site visits. The evaluation monitor sends the reviewers (a) the report, (b) the reviewers' questions, (c) the instruments, and (d) the instructions for use of instruments and dates of site review. The institutions are sent (a) criteria, (b) questions that site visitors will be using, (c) names of the site visitors, (d) dates of review, and (e) date when a decision will be reached.

3.2 Conduct site review. DRDR evaluators assist in the site review according to the procedure (described in chapter five).

3.3 Receive assessments from judges. The assessments from judges who made site visits are received and made available to the DRDR evaluator, who organizes them according to decision situations and stratifications within decision situations, if necessary (e.g., program plans of a similar substantive nature).

3.4 Send data for analysis. After analyses are returned. they are prepared for review by the DRDR evaluators. Rank orderings within each category are summarized and prepared for the internal review.

3.6 Perform internal review. DRDR decision-makers meet with evaluators to study the data on rankings and to consider priorities and constraints in preparation for making decisions.

3.7 Decision C. DRDR decision-makers determine which proposals will be funded (or committed to) and those that will be rejected.

3.7 Reject. DRDR decision-makers, assisted by DRDR evaluators, identify the unsuccessful proposals and notify the interested groups or institutions of their rejection.

3.9 Recycle. DRDR decision-makers, assisted by DRDR evaluators, identify proposals which potentially are acceptable and notify the interested groups or institutions of what modifications must be made.

4.0 Make commitment. DRDR makes commitments to successful groups or institutions.

III

Illustrations of the General System Model

This chapter illustrates the evaluation model described in chapter two. Specifically, this chapter provides walk throughs for decisions 2, 4, 6, and 9. These particular decision points are illustrated because they represent the range of evaluation problems implied by the support policy. In addition, they encompass many if not all of the most important decisions serviced by the proposed evaluation system.

Application to Decision 2 - New Institution Review

Decision 2 - Should a given proposal to start a new institution be funded?

DRDR, after identifying funds that can be utilized, decides to start new r & d institutions. This announcement is circulated, proposals are received and reviewed, and the three - six month planning grants are awarded to approximately three times as many groups as will be funded. For illustrative purposes, assume nine planning grants are competing for three eventual contracts. It is anticipated that all three of the successful groups will grow to become mature institutions.

Guidelines (see appendix A) are sent (1.0) to each of the nine groups working on planning grants and proposals are received and reviewed (1.1) by the specified date. A contractor is selected to perform analyses according to specifications. In the meantime, evaluation monitors determine if guidelines have been followed and if all required information is included in the proposal (1.2). This task requires about three man-days. If a proposal is inadequate, it is recycled for revision (1.3) and one week is allowed for its return. Then DRDR evaluators attempt to verify information contained in the proposals (2.2). They note information regarding such things as supporting institutional commitments (use of data processing facilities, etc.), personnel commitments, and research findings. They verify the accuracy through phone calls to knowledgable people. About one-half day is spent on each proposal. Any information remaining in question is noted for later referral to the site visitors.

Expert judges have been identified according to systematic procedures described in "Selection, Training, and Assignment of Judges." From this pool, nine are identified (2.0) who have expertise in judging management, planning, and personnel development. By specified procedure, DRDR assigns the nine judges to read the nine proposals (2.1) and they are circulated so that each is read by three judges.

After the DRDR evaluators complete their verification checks (2.3), the proposals, along with all instructions, instruments, and materials required, are sent to the judges for review and assessment (2.4).

One week is allowed for assessments to be performed. Judges are allowed one man-day per proposal to review, to write the report, and to respond to the instrument. Three independent reviews are made of each proposal; consequently, twenty-seven man-days are required of the nine judges. One week is scheduled for this review.

While reviews are being conducted, DRDR evaluators make plans for the analysis to be conducted. As soon as readers return documents (2.5), DRDR evaluators collect and organize assessment instruments. These evaluators then send instruments (2.6) to an analysis contractor where they are analyzed and rank orders are obtained. Two weeks are required. Monitors, in the meantime, prepare for meeting with DRDR decision-makers.

After data are returned DRDR evaluators review the analysis (2.7) and prepare for internal review (2.8). DRDR decision-makers consider the strengths and weaknesses of each section of the nine proposals (2.9), and divide the proposals into the top three and bottom six (2.10). The six unsuccessful applicants are notified (2.11) and the other three are told of the acceptance of their proposal (4.0).

Application to Decision 4 - Maturity Review

Decision 4 - Is the capability of the institution to manage its basic program plan satisfactory?

Several new institutions (for this illustration, assume three) received planning grants of six months, moved from planning into the new-institution phase, and after a period of two years passed successfully into the developing-institution phase. During the successive two - four years these three developing institutions worked on a program of r & d activities, developed their staffs and planning and management capabilities, and arrived at a most significant point in their history - a review to determine if they have the institutional capabilities to manage a program plan and thus be designated as mature r & d institutions. This is the last time DRDR, having nurtured them from infants to maturity, examine carefully their institutional capabilities.

Guidelines (see appendix A) are sent (1.0) to the three institutions five months before their fiscal year ends, with instructions to respond by a deadline date set at least three months before the end of the fiscal year (to allow two months for the decision and one month for negotiating). The institutions also are told to expect site reviews to begin about forty-five days after their reports are received in DRDR. The site reviews will involve five DRDR-selected expert judges. Their names will be made known to the institutions at least twenty-five days before their visit. The institutions also will be informed of the questions and criteria that site visitors will have and will be given a chance to review and respond to the reviewers' reports.

On the specified date, the three reports (responses to guidelines) arrive at DRDR. The DRDR evaluator checks the three reports for content (1.1). He determines if all information called for in the guidelines is in fact included. If any required content is missing, he returns the report, notes the needed additional information, and allows one week for its return; otherwise, reports are forwarded for further analysis (1.2). Reports that contain the required information are examined by DRDR evaluators (2.2). Any questionable items are noted and held for reference to the site visitors (2.3).

Five expert judges are selected according to the specified procedure that covers the areas of expertise needed (2.0). The emphasis is on judging planning, management, and personnel of the institution.

DRDR then assigns the judges to read the reports and assess them according to specified criteria (2.1). Information (names, criteria, dates, etc.) about the site review is sent to the interested institutions. Each judge assigned the three reports is given an instrument for recording his assessments (2.4).

When the judges return the reports (2.5) the DRDR evaluator collects and organizes the assessment instruments and sends them to the contractor for analysis (2.6). Two weeks are allowed to perform the analyses. After analyses are returned, DRDR evaluators review them (2.7) and summarize the ranks for the DRDR decision-makers who review each ranked section (2.8) and determine their position (2.9). At least three of the five expert judges should recommend "passing". Rank order of the three reports by sections reveals their strengths and weaknesses (2.10). Therefore, any one of the institutional reviews may be concluded (2.11) at this point with the determination to phase out, support, or to recycle. DRDR notifies each institution of its decision.

For purposes of the illustration, assume a site visit is made to each of the three (3.0). The evaluator notifies the judges of the site-visit schedule. Each judge is assigned to visit the institution whose report he reviewed (3.1). Each visit is conducted during a two-day period and one day is allowed each judge for compiling his report (3.2). Thus, forty-five man-days of judges' time are required to conduct the visit and compile the reports. The visits are scheduled to allow two weeks for visiting and filing the reports. Visits are conducted according to the plan outlined in "Procedures for Site Reviews" (see chapter five).

Assessments then are received at DRDR (3.3) and the instruments are sent to the contractor for analysis (3.4). One week is allocated for analysis.

After receiving the analyses from the contractor (3.5) the DRDR evaluator prepares for the internal review (3.6). DRDR decision-makers then consider the relative strengths and weaknesses of each institution by areas of concern, examine the rank-order data as well as overall recommendations, and make decisions about each institution (3.7). The division has three alternatives: phase out support (3.8), recycle one more year (3.9), or award status as a mature institution (4.0). Data should enable a defensible decision to be made - given the constraints, priorities, and policies of DRDR. DRDR then implements decisions.

Application to Decision 6 - Program Plan Review

Decision 6 - Should the Office of Education commit itself to support given proposed new program plans?

Mature institutions have been invited to submit proposals to initiate new programs for training technologically skilled but unemployed persons to become environmental-control specialists who can help "clean up the environment." Five proposals for five-year grants approximating $3,500,000 are received. The funding of one or more of these represents a substantial portion of the DRDR budget; and such a program would have high social significance. Thus, the five proposals require thorough evaluation.

Assuming that decision A is positive, DRDR identifies expert judges in a stratified classification (2.0) and randomly assigns five of them to read the five proposals (2.1). Meanwhile, others at DRDR will verify the authenticity of the information in the documents presented by the institutions (2.2) and later refer discrepancies to site visitors(2.3). Once the judges receive copies of proposals, guidelines, and evaluation forms (2.4), they independently submit their judgments on each of the criterion measures or dimensions of the evaluation instruments. Considerable attention is given to determine if the proposals furnished positive evidence of meeting such criteria as (1) fulfillment of DRDR priorities and of long- and short-term needs of identifiable social groups in the nation, (2) sound program planning for successful operation including built-in evaluation procedures, and (3) designation of milestone reviews for attaining specific objectives. After the data corresponding to the judgments of the five expert evaluators are received (2.5) they are sent to an external agency for analysis (2.6), returned (2.7) and then summarized in terms of how the proposals ranked on each of several relevant criterion dimensions (2.8). Painstaking internal review at DRDR subsequently takes place. Not only the rankings, but also the availability of funds and the existence of competing priorities and prior commitments, are carefully weighed and interpreted (2.9). Decision B (2.10) is then made to select the top-ranked proposal, at least tentatively. The four unsuccessful proposers are notified (2.11).

In view of the magnitude of the potential commitment, the third stage of the System Model involves observing the capabilities of the institution for implementing the program plan. A site visitation is required (3.0). The same five expert judges who read the proposals automatically become site visitors (3.1) and proceed to the institution two or three weeks later (3.2). The site visitors not only try to reconcile any discrepancies referred to them (2.3), but they also examine first-hand the capabilities of the institution. Once the data on the evaluation instruments are received from the judges (3.3), they are sent to the contractor for data analysis (3.4) and returned a few days later (3.5). These data are subjected to careful internal review and are checked against information presented in the proposal. Once again, competing priorities, budgetary resources, and other commitments are studied (3.6). Finally, on the basis of the ranking assigned (3.7), decision C is made either to reject or to accept the proposed program. Acceptance of the proposal means that a commitment (4.0) is made for funding a proposed new program plan.

Application to Decision 9 - Program Review

Decision 9 - Did the program reach its objectives?
Assume that a mature institution with a four-year grant of $1,200,000 to prepare instructional materials emphasizing an inductive, problem-solving approach in high school physics has reached the terminal-review stage. At this point a report is filed with DRDR so that it can decide how adequately the program attained the objectives and goals that it set for itself and how well the product represented by elements in the final report meets acceptable standards. Also, the terminal review (without a site review) allows DRDR to ascertain

if the products are harmonious with societal needs and priorities and with expectations of current educational audiences and if they are competitive with similar products from other agencies.

Three expert judges are identified and assigned (2.0 and 2.1) to look at the final report assigned to them (2.4) and to make assessments. The judges use certain criteria pertaining to the importance, quality, and probable usefulness of elements cited in the final report and examine samples of instructional materials like teachers' manuals, workbooks, textbooks, film strips, testing exercises, and examples of students' work. In assessing the quality, the expert judges rate the design, accuracy, and comprehensiveness of instructional materials plus their suitability, cost and marketability for the target population. Any supporting evidence such as sales figures, journal reviews, testimonial letters, minutes of school-board meetings, and information from phone calls to teachers and administrators is considered.

Once the judgments are received and recorded as data (2.5), the information is sent to an external agency for analysis (2.6). After it is returned, its internal analysis (2.7) occurs, followed by a summary analysis involving a scale value (ranking) (2.8). An internal review by DRDR decision-makers (2.9), constituting an interpretation of the analyzed data in relation to the product and its elements as well as the degree to which certain criteria were met, leads to decision B (2.10) regarding how satisfactory the product appears.

If marked discrepancies are noted between what was stated in the final report and the actual state of affairs, steps 3.0 - 3.8 involving sequential activities of a site visitation and its accompanying evaluative judgments follow. Such action leading to decision C is unlikely in a mature institution.

IV

Decisions, Criteria, and Guidelines

So far this report has responded to the charge by presenting a general evaluation model and by illustrating how that model applies to decisions associated with the new DRDR support policy. DRDR also specified that the task forces suggest criteria to be applied in the evaluation associated with each of the ten decisions.

Consequently, this chapter presents a master list of criteria believed to be sufficient for servicing the ten decisions. The chapter also analyzes how the criteria apply differentially to the ten decisions.

The ten decisions require the use of four relatively distinct sets of criteria. Decisions 1 and 2 are served by criteria associated with the prospects for developing a new institution; decision 4 is served by criteria concerned with the quality of past efforts to develop new institutions; decisions 3, 5, and 6 are served by criteria for judging the worth of a proposed program; decisions 7, 8, and 9 are served by criteria for judging completed program activities; and decision 10 is served by all criteria.

Analysis of How Criteria Relate to the Ten Decisions

Each of the ten evaluation types implies certain criteria appropriate to the decisions to be made at that point. The actual criteria listed were derived as follows: each member of the Advocate Team, after thorough study of a series of documents provided by DRDR, after a day-long briefing related chiefly to the problems attendant on current evaluation practices, and after considerable discussion by the team, prepared a listing of criterion nominations differentiated in relation to the ten evaluation types. The complete listing of the 357 nominations derived from this process was then put through several iterations of a classification process.

It became clear from the manipulations of this process that there were two major dimensions along which the criteria needed to be classified.

Institution-program dimension. Certain criteria related primarily to institutional characteristics, while others related primarily to program characteristics.

Time dimension (dichotomously characterized as a prospective-retrospective dimension). Certain criteria were forward looking and called for proposals; others were backward looking and called for reports.

This bilateral dimensionality suggests that the criteria can most conveniently be organized in the form of a 2 x 2 table such as shown in table 1. Certain criteria were appropriate to prospective institutions, others to prospective programs, others to retrospective institutions, and still others to retrospective programs. The cells relating to these four classifications are labeled, for ease in reference 1, 2, 3, and 4 respectively. Criteria in cells 1 and 2 are applied to proposals; criteria in cells 3 and 4 are applied to reports.

Table 1

Basic Criterion Format

		Organizational Level	
		Institution	Program
Viewpoint	Prospective (Proposals)	1	2
	Retrospective (Reports)	3	4

Each of the ten evaluation types may be classified as calling for a prospective institution evaluation, a retrospective institution evaluation, a prospective program evaluation, or a retrospective program evaluation. Figure 2 displays the classifications made by the advocate team. Nine of the ten evaluation types fall conveniently into one of the four criterion classification cells. Decision 10, Budget and Contract Review, contains elements of all four.

As will be seen, the criteria found in these four cells show a certain parallelism, but they are by no means identical. Generally the criteria can be contained adequately in terms of ten major classifications,[1] but not all classifications apply equally either in

---

[1] These classifications are incomplete as of this writing since not all 357 originally nominated items have been successfully assigned. Minor variations (chiefly additions) may occur at a later date.

Figure 2

Types of Evaluation Required for Each Decision Point

	Institution	Both	Program
Prospective	1. Institutional Planning-Grant Award 2. Institutional Operation-Grant Award		3. Program-Plan Approval 5. Program Planning-Grant Award 6. Program Plans Approval
Both		10. Annual Budget and Contract Review	
Retrospective	4. Management's Capabilities Certification		7. Milestone Review 8. Unanticipated Modification Review 9. Program Outcome Evaluation

whole or in part to the four cells. To clarify, the criteria are displayed in table 2. The complete criteria list is found on the vertical dimension with the four classifications for criteria found across the horizontal dimension. Y's (for yes) and N's (for no) in the cells indicate which classes of criteria apply to each criterion in the master list. Superscripts over the Y's and N's denote special meanings as explained in the footnotes. Since it is known that the different classifications of criteria apply differentially to the ten decisions, table 2 is useful in selecting criteria and developing instrumentation to service the different decision situations.

The criteria are embedded in two sets of documents appearing in the appendix A:

-- "Guidelines for applicants" for DRDR support that instruct the applicants to supply information needed by the evaluators to apply all the criteria relevant to each pending decision, and

-- "Guidelines for judges" to direct applicants' attention to key information in the applications and to supply the criteria for judging them.

The two categories of guidelines are interlocked at every point so that applicants are directed to provide what the judges need; conversely, the judges are directed to inspect what the applicants provide. The criteria for judgment are the points in common between the two sets of guidelines; i.e., both the applicants and the judges are told the basis on which DRDR wants to rest its decisions.

Full sets of guidelines appear in the appendix A for decision points 1 - 6. For decision points 7 - 10, where the DRDR evaluation staff

Table 2

Master List of Criteria Cross Referenced to the Ten Support Policy Decisions

	Types of Criteria	Prospective Institution	Prospective Program	Retrospective Institution	Retrospective Program
	Decisions Served	1, 2, 10	3, 5, 6, 10	4, 10	7, 8, 9, 10
Master List of Criteria	1. Significance of focus	Y[a]	Y[b]	Y[a]	Y[b]
	A. Priority	Y	Y	Y	Y
	1. Congruence with government priorities	Y	Y	Y	Y
	2. Congruence with accepted values	Y	Y[c]	Y	Y
	3. Congruence with national professional education priorities	Y	Y[c]	Y	Y
	4. Congruence with national social and economic priorities	Y	Y[c]	Y	Y
	5. Relationship to pupil, demographic, and economic targets	Y	Y[c]	Y	Y
	6. Intrinsic significance	Y	Y	Y	Y
	B. Amenability to an r & d approach	Y	Y	Y	N
	C. Durability and recidivism	N	N	Y	Y
	D. Programmatic nature--capable of programmatic exploration	Y	N	Y	N

a = Significance of focus (Mission)
b = Significance of focus (Program Goal)
c = These items should be used only with proposals coming from mature institutions that have not undergone evaluations 1 - 4.

Types of Criteria	Prospective Institution	Prospective Program	Retrospective Institution	Retrospective Program
Decisions Served	1, 2, 10	3, 5, 6, 10	4, 10	7, 8, 9, 10
II. Significance of outcomes	Y^d	Y^d	Y^e	Y^e
A. Direct benefits	N	Y	Y	Y
B. Indirect benefits	N	N	Y	Y
C. Negative side effects	N	N	Y	Y
D. Pervasiveness	N	N	Y	Y
E. Timeliness-criticality	N	Y	Y	Y
F. Exportability	N	N	N	Y
III. Uniqueness	Y	Y	Y	Y
A. Substantive uniqueness--only agent exploring area	Y	Y	Y	Y
B. Geographic uniqueness--distinct regional contribution	Y	Y	Y	Y
IV. Viability	Y	Y	Y	Y
A. Management capability	N	N	Y	N
B. Planning capability	Y	Y	N	N
C. Fiscal responsibility	N	N	Y	N
1. Fiscal controls	N	N	Y	N
2. Program budgeting	N	N	Y	N

d = Significance of prospective outcomes
e = Significance of achieved outcomes

Types of Criteria	Prospective Institution	Prospective Program	Retrospective Institution	Retrospective Program
Decisions Served	1, 2, 10	3, 5, 6, 10	4, 10	7, 8, 9, 10
3. Adequate reporting	N	N	Y	N
D. Political, legal, social, and moral viability	Y	Y	Y	N
E. Cooperability--cooptability	Y	Y	Y	Y
1. Endorsement and assistance from other institutions	Y	N	Y[f]	N
2. Potential for cooperation and collaboration	Y	Y[g]	Y[h]	Y[g]
3. Potential for enlistment	Y	N	Y[j]	N
4. Availability of needed services	N	Y	Y[j]	N
5. Relation to earlier work of other institutions	Y	Y[k]	N	Y[k]
6. Existence of communications network	N	N	Y	N
F. Parity	Y	Y	Y	N
1. Representation from client groups	Y	Y	Y	N
2. Participation from key audiences	Y	Y	Y	N
3. Representation from various disciplines	N	N	Y	N

f = Assistance from other institutions
g = Potential for cooperation and collaboration with other programs
h = Cooperation and collaboration
i = Enlistment
j = Adequacy of needed services
k = Relations to earlier work of institution

Types of Criteria	Prospective Institution	Prospective Program	Retrospective Institution	Retrospective Program
Decisions Served	1, 2, 10	3, 5, 6, 10	4, 10	7, 8, 9, 10
4. Representation from various technical fields	N	N	Y	N
G. Practicality	N	Y	Y	N
1. Scope of work	N	Y	Y	N
2. Availability	N	Y	Y	N
3. Schedule	N	Y	Y	N
H. Geography	Y	N	N	N
1. Accessibility	Y	N	N	N
2. Ability to recruit personnel	Y	N	N	N
3. Ability to cooperate with other institutions	Y	N	N	N
I. Personnel	Y	Y	Y	N
1. Competence	Y	Y	Y	N
2. Availability	Y	Y	Y	N
3. Interest	Y	Y	Y	N
J. Facilities	N	N	Y	N
1. Space	N	N	Y	N
2. Equipment	N	N	Y	N
V. Planning and evaluation adequacy	Y	N	Y	N
A. Means to assess and modify goals	Y	N	Y	N
B. Means to identify and assess alternative strategies	Y	N	Y	N

Types of Criteria	Prospective Institution	Prospective Program	Retrospective Institution	Retrospective Program
Decisions Served	1, 2, 10	3, 5, 6, 10	4, 10	7, 8, 9, 10
C. Means to monitor and assess operational activities	N	N	Y	N
D. Means to determine achievement of objectives	N	N	Y	N
E. Means to relate budget to programs	N	N	Y	N
VI. Program balance	N	N	Y	N
A. Necessary and sufficient program set	N	N	Y	N
1. Cumulativeness--logical relation of goals at every level	N	N	Y	N
2. Scope--sufficient spectrum of program activity to cover needs	N	N	Y	N
B. Adequate balance of resource allocations to programs	N	N	Y	N
C. Adequate balance between r & d activities	N	N	Y	N

Types of Criteria	Prospective Institution	Prospective Program	Retrospective Institution	Retrospective Program
Decisions Served	1, 2, 10	3, 5, 6, 10	4, 10	7, 8, 9, 10
VII. Adequacy program elements	N	Y[1]	N	Y
A. Objectives specified	N	Y	N	Y
B. Relevance of objectives to program and institutional goals	N	Y[m]	N	Y
C. Adequacy of procedural design	N	Y	N	Y
D. Methodological adequacy	N	Y	N	Y
E. Appropriateness of schedule	N	Y	N	N
F. Appropriateness of personnel	N	Y	N	N
G. Adequacy of facilities	N	Y	N	N
VIII. Cost	Y	Y	Y	Y
A. Budget	Y	Y	Y	Y
1. Suitability	Y	Y	Y	Y
2. Sufficiency	Y	Y	Y	Y
B. Time	Y	Y	Y	Y
C. Personnel	Y	Y	Y	Y
IX. Economic efficiency	N		Y	Y

1 = Adequacy of prospective program plans
m = (Not relevant for general-purpose mature institutions such as AIR or ETS)

Types of Criteria	Prospective Institution	Prospective Program	Retrospective Institution	Retrospective Program
Decisions Served	1, 2, 10	3, 5, 6, 10	4, 10	7, 8, 9, 10
A. Unit costs	N	N	Y	Y
B. Cost/benefit ratio	N	N	Y	Y
X. Potential for outside support	Y	N	Y[n]	N

n = Some outside support achieved

exercises less responsibility for gathering and assessing information, responsibilities are described but guidelines are not supplied for reasons given in the appendix.

Guidelines appearing in appendix A do not conform to the classifications of criteria that have been presented in this chapter. The guidelines in the appendix were prepared simultaneously with the development of chapter four; it was not apparent until late in the work of the Advocate Team that the criteria could be parsimoniously classified and applied to decision situations according to the categories of retrospective and prospective programs and institutions. Nevertheless, the guidelines in the appendix will prove useful to DRDR in launching its evaluation system. However, revisions of the guidelines should begin immediately to rearrange them to conform with the classification system that appears in this chapter. With added time, the Advocate Team or another outside agency could perform this task for DRDR.

V

Special Procedures

The combination of the new support policy and the model for evaluation proposed in this report calls for some departure from existing evaluation procedures. This chapter makes specific suggestions for modifying DRDR evaluation practice. The first part of the chapter provides recommendations for the selection, training, and assignment of expert judges. If DRDR follows these recommendations, credibility, reliability, and objectivity are insured for the proposed evaluation system.

The second part proposes instrumentation and quantitative procedures to be used in obtaining and analyzing comparative judgments. This part discusses the all-important control mechanism as embodied in the expert judges. They are expected to make independent judgments that later can be submitted to psychometric analysis to determine their reliability and the rank order of the objects of the judgments.

The third part suggests explicit procedures for site reviews to standardize the conditions under which judgmental data are gathered.

These procedures will insure that assessments are obtained from each judge independently.

The final part outlines procedures to be followed in conducting audits of the new evaluation system.

Expert Judges

The Advocate Team recommends that DRDR install the systematic procedure described below for the purpose of selecting, training, and assigning expert judges to read and rate proposals and reports.

To improve the reliability and validity of evaluating proposals at various decision points, certain procedures for the selection, training, and assignment of readers are desirable. Although the U. S. Office of Education maintains a large file of external reviewers that can be forwarded to DRDR, it is necessary to update this file and to develop pools or subpopulations of readers who will correspond in terms of their competencies to certain broad substantive areas in education.

Once subpopulations are identified in relation to broad areas of classifications and in relation to the need for them to serve at designated decision points in the Maturity Model, a random sample of readers will be chosen and asked to evaluate proposals with the understanding that they also will be expected to participate as site visitors.

After these individuals are identified, they will come to Washington to participate in a two- or three-day training session. They will practice carrying out evaluations with two or three representative proposals. Such a session will help to achieve a common frame of reference that will increase substantially the reliability of the evaluation process by establishing a comparable level of understanding of the directions in documents and the procedures to be followed; defining certain terms unique to the DRDR operation; and familiarizing participants with the nature of the rating process in evaluation of programs and institutions so that common, systematic errors in response style can be minimized. After such training, the readers will be given a common experience with a new proposal to check on the reliability of judgments and to identify potential evaluators who might be divergent in their responses. If the divergence appears to be due to the inability of the evaluator to participate effectively in the mechanics of the rating process rather than to a difference in philosophic stance, he can be given additional training or dropped. (The estimates of reliability could be obtained from standard techniques of analysis of variance or correlational methodology.)

The follow-up activity of evaluating a trial proposal that could serve as an anchor or linkage mechanism to evaluations of other proposals serves still another purpose. It affords an approximate basis for DRDR to make some allowance for subsequent differences among the ratings of evaluators that would still exist after they had received supervised training. The determination of normative data for the responses of expert judges rests on two assumptions, an evaluative instrument covering important criterion dimensions has been developed for use by evaluators and different forms of this instrument contain several common items or anchor dimensions for equating purposes. This point is explained in the next section.

From each of the pools of potential DRDR evaluators in a given substantive area a random assignment of three to five readers - depending on the decision point involved - will be made to each proposal. (When a decision point involves a substantial investment of DRDR resources, five evaluators will be assigned; at a point of relatively less importance a committee of three readers will suffice.) Spuriously high estimates of reliability, resulting from the tendency of some evaluators to be swayed toward the opinions of dominate or prestigious persons, will be avoided by requiring each individual to evaluate independently and privately. Quality control of the evaluation process and the continued realization of maintaining its reliability at a subsequent point in the Maturity Model also will be enhanced by having the external evaluators participate in onsite visits at institutions that contributed the proposals they reviewed.

Instrumentation and Quantitative Procedures

The Advocate Team recommends that DRDR employ the instrumentation and quantitative procedures described below for making comparative judgments.

A methodology must be developed to rank accurately the submitted proposals and reports. Thus DRDR should prepare a comprehensive evaluation instrument reflecting the criteria developed by the Advocate Team adapted to meet the requirements of different decision-points in the Maturity Model and devise appropriate quantitative procedures to determine comparative rankings of expert judges for proposals and reports within given broad substantive areas and to the extent possible, across different substantive areas. Furthermore, a contractual agreement should be made with an external agency (e.g., Educational Testing Service) to develop procedures for analyzing data from expert judges for arriving at reliable comparative rankings; to apply these procedures to the analysis of data derived from the different forms of the instrument that DRDR has devised for evaluation; and to communicate these resulting rankings to DRDR. This agency also can help identify potential expert judges and develop procedures for assigning judges to rating tasks and site visitations.

Development and scoring of evaluation instrument. The following steps guide the preparation of an evaluation instrument and the development, use, and monitoring of a scoring system adapted to meet the requirements of different decision-points in the Maturity Model:

-- A scale will be constructed, corresponding to each of the major criterion variables previously identified at each decision-point (see chapter four), and incorporated within the two sets of guidelines (see appendix A). Its items or questions will represent an operational definition of subcriteria or objectives subsumed under each major criterion dimension.

-- Each form will contain certain criterion dimensions and thus questions or items common to other forms. Consequently, a core of anchor items ensues that can be used as linkages for an approximate equating of judgments at different decision-points rendered by different expert judges or for studying gross changes in judgments from one decision-point to another. (The inclusion of a certain number of common anchor items in all forms of the evaluation instrument also will permit a rough equating of differences in the recorded perceptions of various judges in somewhat different content areas at varying points of decision in the Maturity Model.)

-- A scoring system will need to be derived for the questions or items within each criterion dimension so that points can be accumulated within each dimension to afford a basis for comparative evaluations across expert judges.

-- Once appropriate standardization procedures are devised to permit the conversion of data from different scales to a common base (standard scores having the same means and same standard deviations), a method will be afforded at each decision-point for drawing profiles that indicate on each of the proposal or program as evaluated by each judge. Although subject to a considerable error of measurement as a function of the few questions within each criterion dimension, such a profile will furnish (1) a gross, diagnostic picture of strong and weak points that will have important feedback value to the institution or proposal writer; (2) a means of examining systematic differences in the evaluations of the expert judges at a given decision-point or from one decision-point to another; (3) a basis for studying differences in the perceptions of expert judges on each proposal and across proposals at a particular decision-point; and thus (4) a vehicle for monitoring the responses of expert judges.

-- Once a weighing system has been derived for each of the criterion dimensions at a particular decision-point in the Maturity Model, the comparative standings of the proposals will be added over the several dimensions so that a final number is obtained for each proposal to permit its being given an overall rank value.

-- Whenever appropriate, estimates of the reliability of scores at each criterion dimension and for composite scores over several dimensions will be obtained. Failure of an individual judge's assessments to correlate with those of other judges will suggest an examination of his form to check for any obvious errors in the recording process or idiosyncracies in his response style. Depending on the circumstances surrounding the evaluation, it may be necessary to obtain the judgments of an additional judge. Such a necessity, however, will be avoided when possible.

Alternative approaches to determining comparative judgments. Several alternative quantitative procedures must be explored in arriving at comparative judgments of the quality of proposals and reports, both within a given content area and across different substantive areas. DRDR anticipates that two rather distinct situations may arise in the number of proposals to be submitted: the submission of approximately five to ten proposals in a given substantive area--the more likely occurrence, and the submission of as many as forty or fifty proposals in a particularly popular area of interest.

Although somewhat different adaptations of methodologies probably will be required in each of these two situations, the basic methodology will be similar. The external agency previously cited will be requested to explore several alternative quantitative procedures to allow the establishment of reliable and valid comparative judgments for each of these two situations.

Two methodologies to which this agency might give serious consideration are those of paired comparisons and item sampling with which psychometricians are familiar. The paired comparison technique involves the taking of all possible permutations of pairs of objects (e.g., proposals) in a given set and judging which one of the objects in the pair is of higher value or holds greater appeal. A relatively complex arithmetical procedure leads to the determination of scaled items. In the instance of an evaluation instrument that does not contain enough items or questions in a criterion dimension for reliable scoring, the paired comparison approach is a promising one for obtaining scale values if the number of objects (proposals) does not exceed ten or twelve.

For the circumstance of forty or fifty proposals, it seems reasonable to believe that if the overlapping of proposals in samplings of ten or twelve proposals can be introduced to the extent of three or four proposals, a mathematical procedure can be developed for equating the scale values from the paired comparisons in one sampling of proposals to another sampling. Thus a means will be afforded for arriving at comparable scale values for the entire group of forty or fifty or more proposals. This procedure in essence combines features of paired comparisons and item sampling methodology. Comparative judgments might be obtained only on single dimensions or on clusters of highly correlated dimensions. A working methodology to permit the determination of scale values of many proposals will constitute an important breakthrough in the comparative evaluation work of the DRDR.

Procedures for Site Reviews

The Advocate Team recommends that the procedures described below be adopted to govern all DRDR-sponsored site reviews and that the ensuing reports of these reviews be utilized by DRDR in its decision-making processes. Site reviews are an important element for collecting and verifying information needed to make decisions regarding the establishment of r & d institutions and the funding of their programs. Of course, the basic information required for DRDR decision-making will be submitted by the institutions in response to DRDR requests. Thus the purposes of site reviews are to verify the accuracy of the information submitted, to confirm or correct the interpretations placed on that information, and to improve the information base for DRDR decisions.

Consequently the following procedures are outlined:

1. Government officials will select site visitors (except for decision 7 where the r & d institutions have the authority for designing milestone evaluations and choosing any site visitors who will be involved). However, the names of site visitors will be submitted to the institutions for them to challenge. The final decision on the choice of site visitors, nevertheless, (excepting decision 7) remains with the government officials.

2. Guidelines used by site visitors will be furnished to the institutions two months before the site review.

3. The institutions will furnish, on request, information

required by the guidelines and by the site visitors.

4. The institution will provide site visitors with a structured presentation. The amount of time allotted for the presentation(s) will be determined by mutual agreement of the institution and the site visitors.

5. Site visitors will have access to institutional documents and institutional personnel.

6. Each site visitor will make independent judgments and independent reports on the visit.

7. A feedback session will occur at the end of each site review for the visitors and institutional personnel. Each visitor will make a tentative report and institutional personnel may question and correct the factual accuracy of the reports.

8. After the site visit, each visitor will submit a draft report to the institution. Institutional personnel, then, will be able to respond to the site visitor regarding accuracy and interpretation of the report's content.

9. After considering the institutional response, each site visitor will prepare a final report for government officials with an exact copy going to the institution.

10. The institution may write a response to the final reports and send it to the authors and government officials.

Evaluation Auditor

The Advocate Team recommends that DRDR establish the evaluation auditing process described below for the purpose of setting minimal levels of credibility for its institutional reviews.

The modes of evaluation discussed so far in this report suffer from a significant deficiency: they are carried out by OE personnel and/or their consultants. Consequently, critical reference groups such as the agencies being evaluated, the Department of HEW, and the Congress may doubt the evaluations credibility.

The purpose of the evaluation auditing recommended here is to offset this possible credibility problem by providing for outside verification of the authenticity of the evaluation findings and conclusions. Simply defined, evaluation auditing is superevaluation; it examines the processes and conclusions of lower-level evaluations for validity, reliability, and objectivity.

The evaluation auditor in this process is analogous to the auditor in the business world. Generally, the latter fulfills two major functions: he verifies the authenticity of the accounting procedures of the firm being audited and the correctness of the accounting figures themselves. Potential investors then know the true fiscal position of the company and can be assured that its position is not being misrepresented. Similarly, investors, company managers, clients, and other publics can be reassured.

The evaluation auditor provides similar assurance. He will certify after proper examination that DRDR and its contractors have considered a variety of value perspectives, have followed proper evaluation procedures and have ascertained findings and conclusions that are warranted by the collected data. Consumers of the contractor's r & d products; investors in those contracts (the Congress); DRDR, other branches of OE, and HEW, who carry the legal responsibility for contract management; the contractors themselves; and other publics can be assured that the evaluation reports essentially represent the true state of affairs.

The evaluation auditor, of course, must be a person of unimpeachable character. He must possess technical expertise in evaluation plus substantive expertise in the area evaluated. For increased credibility, auditors will be recruited from outside of the education establishment. This will avoid the possibility of professional cooptation or the fear of it on the part of noneducationist audiences. (Examples of such credible auditors include Michael Scriven, Phillip Clark, Paul Lazarsfeld, Lee Cronbach, and Stephen Bailey.)

A group of potential auditors will be identified through nomination. The persons initially identified will be contacted for additional recommendations. The process will be repeated until a pool of potential auditors is formed. Each then will be approached for willingness to serve and as institutional proposals come up for review, DRDR will select from the panel.

The processes and findings that the auditor may wish to examine in such a DRDR-institution evaluation interaction are described below.

Identification of expert judges (field readers and site visitors). The auditor must assure himself that panels of expert judges (field readers and site visitors) were selected on the basis of their qualifications and were assigned to particular institutions in non-biased (systematic) ways. Every person qualified to serve as a field reader and/or site visitor will have an equal chance of being impanelled.

OE check review. The auditor must assure himself that the initial screening of institutional proposals by OE staff members was systematic and scrupulously conducted in accordance with published guidelines. He must examine the resulting analysis (which either recycles the proposal for rewriting or accepts the proposal for field-reader review) to certify the validity of the conclusion.

OE verification. The auditor must assure himself that the verification of documents, facts, letters of support, etc., is presented in the proposal objectively and systematically and that the degree of verification made is in fact proper.

Field-reader review. The auditor must assure himself that the review of the field reader was systematically conducted and that his conclusions are valid, replicable, and objective.

Field-reader analysis ranking. The auditor must assure himself that the ranking made of the proposal in comparison with other proposals being simultaneously evaluated (and being audited by other evaluation auditors) was fairly and systematically accomplished.

Site reviews. The auditor must assure himself that the site reviews were conducted systematically and that the site visitors' conclusions are valid and objective.

Site review analysis ranking. The auditor must satisfy himself that the ranking made of the proposal in comparison with other proposals being simultaneously evaluated (and being audited by other evaluation auditors) was fairly and systematically accomplished.

Certain expectations will be held for the auditor's performance. First, he will be engaged prior to the initiation of the review process and will be involved with it throughout. (He will establish feedback channels so that continuous refinements in the evaluation occur if unforeseen constraints, limitations, or problems are discovered.) Second, the evaluation auditor will not take responsibility for the evaluation process itself; rather, he will attempt to determine reasons for its success or failure at every step. His experience, consequently, may be generalizable to other evaluations to enable the whole process to be refined. Third, as indicated earlier, the evaluation auditor will perform roughly the same functions as his counterpart in the business world: certify that the methods of evaluation used fall within the limits of accepted evaluation practice and underwrite the conclusions and interpretations as reasonable in terms of normal standards. He will examine all conclusions and interpretations to insure that they follow from the available data and are consistent with ordinary principles of logic and prudence. Fourth, the evaluation auditor will work on behalf of both DRDR and the proposing institution, pointing out difficulties each created for the other. Fifth, the evaluation auditor will make every effort to determine what decisions his reports will influence and to shape them so that they best service those decisions. Finally, the evaluation auditor will serve as an appeal agent in cases where the institution or DRDR believes that the evaluation process was handled unfairly or mismanaged by one or more of the evaluation agents (DRDR evaluators, field readers, site visitors, ranking analysts, etc.).

The auditor will not be responsible for contract or proposal approvals or for actions taken either by DRDR or by contracting institutions.

To accomplish his functions he must have the right of complete and continuous access to all proposal data, reports, memoranda, and other records. He must be able to interview anyone associated with the proposal, whenever he considers it necessary; it must be his option to verify and validate any data or findings with their sources. He must receive copies of all correspondence, reports, and other key documents that relate to his responsibility. Finally, he must be given a sufficient budget (to use at his sole discretion) to perform his duties.

In his evaluation interactions, the auditor must be cautious to avoid cooptation by either party. The auditor must be close enough to the proposal review process to judge soundly its authenticity; at the same time, he must be distant enough to render those judgments objectively. In particular, the auditor will have to avoid being used as a consultant by either or both parties. His constant interaction with them will make him highly susceptible to such use and his charge to render continuous feedback for refining and redirecting the process also will make him vulnerable. To guard against this, the auditor must document his continuing objectivity. If he is suspected of the slightest twinge of cooptation, his credibility will vanish and the entire auditing process will become useless.

DRDR will be involved in the evaluation of many proposals, particularly during the first few years of the new "mature institution" policy; however, the employment of a full-scale audit for each evaluation is not feasible. Economic considerations militate against it, as does the scarcity of persons who might be used in evaluation-auditor roles. Moreover, a full-scale audit is unnecessary, particularly if the primary intent is to maintain overall credibility rather than to insure absolute justice in all cases. Thus the use of auditing procedures on a probabalistic (sampling) basis is justified. Taxpayers are kept honest by the possibility that their income tax returns may be audited at any time; similarly, evaluations can be kept authentic in the face of the possibility of an evaluation audit. Hence, while technically auditors are assigned to all evaluations, in fact they will function in only about 20 percent of all cases unless asked to intervene as appeal agents. Moreover, the 20 percent sample does not imply that 20 percent of all evaluations are sampled, but different segments of different evaluations (a verfication here, a site review there) so that the auditor's total work-load amounts to about 20 percent of all activities assigned to his jurisdiction. At the same time, the total range of evaluations for which some segment is sampled may approach 100 percent of all evaluations.

VI

Description of the System

To see how the proposed model for evaluation and decision making will appear under conditions of full implementation requires that a complex set of factors be considered from several perspectives. Consequently, this chapter describes the different roles that must be implemented by the involved institutions; an organizational structure for evaluation in DRDR; and a projection of cost factors necessary to calculate evaluation budgets for given circumstances and work loads. The material in this section is not conclusive: specific evaluation and decision-making work loads vary from year to year; consequently, they cannot be projected with any degree of confidence. For this reason, chapter six attempts to convey what would apply given specified assumptions about work loads in a given year.

Institutional Roles

Seven groups share the responsibilities associated with implementing the tasks required by the proposed model: the DRDR decision-makers; the DRDR evaluators; the laboratory and center decision-makers; the laboratory and center evaluators; the external-expert judges; the external, technical-service agencies; and the external evaluation-auditors. This section defines roles for each group according to the requirements of the model presented in chapter two. The breakout of these roles serves as an organizing device. Where practicable, the tasks specified within roles are cross referenced to show how they might apply differentially to the ten decisions and to suggestions that appear elsewhere in the report as to how the tasks might be performed. Also included are comments regarding the working level at which the tasks might be performed.

DRDR decision-makers. DRDR decision-makers must assume the role of evaluation-oriented leaders if the proposed system is to function effectively. They must orient their evaluators to the decisions to be served by evaluation and to the associated information requirements. They must seek to use evaluative data in arriving at decisions. Finally, they must seek and value the assessments of outside auditors concerning the extent to which decisions are based on sound information. Evaluation must be done proactively and systematically if decisions are to be efficiently served by a sound base of timely evaluation data; therefore, DRDR decision-makers must specify their information requirements in advance and insist that the DRDR evaluation system respond to these requests.

The eight tasks to be performed by DRDR decision-makers in implementing proposed evaluation and decision-making system are discussed below.

-- Specification of decisions. Decisions are made at three basic levels within DRDR: division (or above), branch chiefs, and operational. The proposed evaluation system will provide information to assist in decision making at each of these levels. Thus DRDR persons must project the decisions for which they will need information in precise terms and in advance of when the information will be needed. Specifications of such decisions include what questions will have to be answered, by what agents, using what information, and at what future time. Such project will be made annually with respect to each of the ten decision-types and to the breakout of decision-making responsibilities across the main levels of DRDR.

The Office of the Division Director must annually prepare and distribute throughout the division on a document entitled "DRDR Annual Projection of Decisions and Associated Information Requirements." This document will be broken down according to the ten decision-types -- each narrowed further regarding decision-making responsibilities at the main levels. Such a document will be the main reference point for the design and implementation of DRDR evaluation activities.

-- Provision to notify institutions of guidelines for the submission of proposals and reports. In accordance with DRDR's decision-calendar, r & d institutions will be notified two months before future funding opportunities are announced and required evaluation reports are due. This information will be mailed to the institutions having financial support from DRDR. If possible, such information will take the form of specific guidelines such as those included in the appendix A. When new funding opportunities arise, agencies known to respond to requests for proposals will be notified by mail. In addition, widespread notice of the availability of guidelines for the preparation of proposals will be provided for other agencies. All agencies will be given two months to respond.

-- Specification of dates for submission of proposals. In accordance with the overall decision-calendar and in relation to mailing out RFPs, division-level decision-makers will specify deadlines for submitting funding proposals. Operational-level decision-makers, under the supervision of branch chiefs, must then make sure that all concerned parties are aware of these dates.

-- Determination of the tentative acceptability of new proposals and reports. Operational-level decision-makers will determine whether new proposals or reports contain sufficiently complete and accurate information for further consideration in the approval process. If the report fails this check, it will be returned to the institution for revision. The institution thus notified, may resubmit its report for further consideration if the noted deficiencies are rectified within one week.

-- Decisions concerning the acceptance of proposals. Selection of proposals presumably will be made at the level of division director or above. Assistance from branch- and operational-level personnel generally will be required to develop tentative rank-orderings of the proposals or reports based on the data provided from the evaluation system. All decision-makers need to understand thoroughly the evaluation data; also, division-level decision-makers at this point must consider that the external-evaluation auditors will aid the decision process by commenting as early as possible on the validity, reliability, and objectivity of the data. Decision makers at this step must seek to apply the criteria specified in the proposal and report guidelines. At this point, proposals and reports will be ranked in terms of their merits, without considering the availability of funds.

-- Funding decisions. Division-level decision-makers will develop explicit recommendations concerning the funding of proposals or the termination of funding of existing institutions or programs. Actual funding decisions, however, presumably will occur at levels higher than the division director. Funding recommendations must be justified in accordance with assumptions about budgetary constraints and based on previous rank-ordering of the proposals and/or reports.

-- Notification of applications regarding approval or disapproval of proposals. Actual notification tasks probably will be performed by operational-level personnel under the supervision of branch officers. However, personnel at the level of the director of the division probably will officially approve and sign the notifications. Institutions will be told the ranking of their proposals and reports and the associated funding decisions. The basis on which the decisions were reached also will be described.

-- Selection of expert judges. The pool of judges to read and rank proposals and participate in site visits must be selected at the level of the division director or above. The division director, with assistance from his branch chiefs and operational staff, will determine qualifications for membership in the pool and will select individuals in accordance with explicit procedures. Also, an outside agency (e.g., Educational Testing Service) might continually work on the refinement of selection procedures as well as the implementation of the associated data gathering.

DRDR evaluators. A strong office of evaluation must be established within DRDR to serve six functions. The first is to work continuously with DRDR to delineate the information requirements associated with its annual decision-calendar. The second is to plan and coordinate the implementation of the basic data-gathering system that services DRDR decision-makers. The third is to interpret and supply data to DRDR decision-makers regarding decisions. The fourth is to verify the accuracy of evaluative data submitted by institutional personnel to DRDR. The fifth is to provide liaison and coordination between DRDR and the external evaluation agents (i.e., the external expert judges, the external technical-service agencies, and the evaluation auditors). The sixth is to inform the external auditors concerning decisions reached in DRDR and the evaluative bases for those decisions.

The role of the DRDR evaluators also encompasses the thirteen specific tasks they are to perform within the framework of the proposed model.

-- Development of guidelines for proposals and evaluation reports. Institutions must systematically provide basic data to assist DRDR decision-makers in making all decisions with the exceptions of 7, 8, and 10. In the case of 7, institutional personnel operating existing programs will design and conduct their own evaluations with only general guidance from DRDR. Evaluations to support decision 8 are ad hoc and emerge only in response to special circumstances, i.e., concern that an existing program within a mature institution is jeopardized because several of its key program staff are leaving. Evaluations to support decision 10 will be based on basic data from the field, usually derived from existing evaluation reports presented to DRDR in reference to other decision types.

DRDR evaluators -- probably intermediate master's-level personnel in the evaluation office -- will prepare guidelines based on information in the annual DRDR projection of decisions and associated information requirements similar to the guidelines presented in the appendix A. It is suggested that DRDR begin by using these suggested guidelines and that thereafter the guidelines be reviewed and updated annually. Also, DRDR evaluators must work continually with outside technical agencies that have contracted to do data analysis to improve the data-gathering guidelines.

-- Development of guidelines and instruments for the reading of proposals and for site reviews. The same conditions as explained for proposals and evaluation reports apply here.

-- Check for completeness of reports and proposals. Paraprofessional personnel in the evaluation office will systematically check all reports and proposals received to insure that they provide necessary information.

This task generally will be heavy and continuous; however, peak loads can be projected by reference to the DRDR annual projection of decisions and associated information-requirement documents. The main concern will be for decisions 1 - 6, since these all have funding implications and specific time constraints. Under a less rigorous schedule the paraprofessionals will also check data provided by the institutions in reference to decisions 7 and 9.

Training sessions for the paraprofessionals probably will be conducted by intermediate (master's level) personnel in the evaluation office. The guidelines in appendix A will help design such training activities.

-- Development of reports concerning the validity of proposals and evaluation reports. Intermediate (master's level) personnel will be involved in determining the truth value of data provided by the institutions. Such data generally lack objectivity and cannot be assumed to be credible to the DRDR decision-makers; consequently, validity checks are crucial, especially regarding decisions 2, 4, 6, and 9. For these decisions the intermediate-level DRDR evaluators will make site visits or employ special consultants to conduct such visits. Procedures for these site visits must adhere to those specified in chapter five.

Basically, the validity checks will begin by identifying the critical claims made in reports and proposals; then, the data provided will be checked to determine whether they support the claims. Next, the proposals and reports will be checked for accuracy of the data. Finally, if there is any question and if the decision is considered to be a significant one, (especially including 2, 4, and 6), site visits must be carried out and final reports written. The basic step within this role is determining the significant claims in the proposals and reports. This will be done by referring to the guidelines that were the basis for preparation of the proposals and reports and to the rank order of criteria that formed the basis for the guidelines.

The intermediate-level personnel in DRDR will be trained specifically to perform this role. Such training will include simulated validation checks of proposals and reports for decisions 2, 4, 6, and 9 and participation as an observer in site visits. Such training might be subcontracted to an agency that trains evaluators (e.g., The Ohio State University, University of Colorado, or University of Illinois). Any such contract should call for the preparation of appropriate simulation-training materials that could be used within DRDR on a continual basis following the initial project.

-- Coordination and monitoring of the work of expert judges. Intermediate-level personnel in DRDR will implement the specified procedure (see chapter five) for obtaining data from expert judges concerning evaluation reports and proposals and site visits. Accordingly, the DRDR evaluators must assign judges to specific reading and/or site visit tasks; orient the persons to their tasks; schedule and arrange the conditions required for the judges to implement their roles; coordinate the work of the judges; secure their reports; organize and store the data provided by the judges; and make the basic data available to the external agency that will perform the data analysis. The activities relating to reading of proposals and reports apply especially to decisions 1, 3, and 5; while the role regarding site visits pertains more to decisions 2, 4, 6, and 8. It has been suggested elsewhere in this report that site visitors must be the same persons who read previous proposals and reports associated with the same programs or institutions. Normally, then, the sequence of the subtasks will call for reading and then site visiting.

Therefore, scheduling of the reading and the site visiting must be done as far in advance as possible and within the overall decision-calendar contained in the "DRDR Annual Projection of Decisions and Associated Information Requirements." The intermediate-level evaluators responsible for the coordination of reading and site-visit tasks must adhere as closely as possible to the procedures specified in chapter five pertaining to assignment of judges to tasks and the conduct of site visits. The evaluators also must become thoroughly familiar with the contents of guidelines that appear in appendix A.

-- Coordination and monitoring of the work of the outside analysis system. Data derived from expert judges regarding both the reading of reports and proposals and site visits will be submitted to a thorough statistical analysis to arrive at a rank ordering of the proposals and reports. (Procedures for such analysis, provided in chapter five, are to be administered by an external technical services agency /e.g., Educational Testing Service/.)

For such an agency to perform its role satisfactorily, it must be monitored and serviced directly by DRDR evaluators. An intermediate-level evaluator from DRDR can perform the linkage function. This evaluator will delineate an analysis schedule in collaboration with personnel from the technical-services institution and will provide data to the agency and retrieve its report in accordance with the specified schedule. Such scheduling should be done annually based on the "DRDR Annual Projection of Decisions and Associated Information Requirements" document.

Also, the liaison evaluator must seek to coordinate efforts to improve both the data-gathering instruments and the analysis procedures. Activities within this area will be most concerned with decisions 2, 4, and 6 because they require the most thorough analysis and rank ordering. The analysis agency also will service decisions 1, 3, and 5, but not with the same urgency and criticality as the three previously mentioned decisions.

-- Interpretation and reporting of rank-order data provided by the external analysis system. The intermediate-level DRDR evaluation, serving a liaison function between the DRDR evaluation-office and the external technical-services agency responsible for analyzing data to rank order proposals and reports, will secure reports from the agency and distribute them to other intermediate-level evaluation personnel responsible for servicing the evaluation requirement associated with particular decisions. These latter intermediate-level evaluators then will prepare a staff memo summarizing and evaluating the accuracy of the rankings that have been derived by the analysis agency. An evaluator's report also will indicate what decisions tend to be indicated, given the specific conditions of the decision situation and the data-analysis results. The evaluator then will convey his written report to the top-level evaluator in his office and will make modifications that both parties agree to. Any irresolvable conflicts regarding the contents of the report will be noted in the report, rather than compromised. Next, the intermediate-level evaluator in charge of servicing the given decision will submit his report both orally and in written form to the designated decision-audiences.

The division director and decision makers at higher levels will comprise the primary audience for reports that serve decision types 2, 4, 6, and 9. The reports that service decisions 1, 3, 5, and 10 should be aimed most directly at branch-level decision-makers. The timing for the preparation and presentation of these reports must be clearly projected on an annual basis in accordance with the "DRDR Annual Projection of Decisions and Associated Information Requirements." Moreover, the director of the evaluation office must consider it one of his prime responsibilities to delineate the differential responsibilities of his intermediate-level evaluators with respect to the decision situations that they are to serve.

The intermediate-level evaluators, who interpret and make recommendations based on reports received from the external analysis agency, must have a working knowledge of advanced statistics (e.g., statistical concepts such as those covered in B. J. Winer's Statistical Principles of Experimental Design and J. P. Guilford's Psychometric Methods). In making their reports these evaluators must be able to critique the rank ordering of proposals or reports provided by the outside firm in terms of reliability and validity. They also must make recommendations regarding the approval of reports and the acceptance of proposals in terms of the original guidelines, specified funding constraints, and data provided by the outside analysis firm. Personnel to serve in these roles might well be recruited from among master's-degree graduates in mathematical statistics, economics, or industrial psychology.

-- Liaison with the external evaluation auditors. One or more intermediate-level evaluators will be assigned as full time liaison with the external evaluation auditors. This evaluation specialist will be distinct from the ones who provide liaison with the outside analysis agency and who service particular decisions. The external-auditor liaison evaluation-specialist will assign evaluation auditors to various decisions to be serviced in accordance with specified procedures. These auditors will come from a pool of personnel selected by the division director. The audit liaison-specialist will orient the auditor to his responsibilities; supply him with relevant guidelines, evaluation reports, and accounts of decisions reached in DRDR; and assist him to communicate his audit reports to relevant audiences.

As noted in chapter five, the DRDR evaluation-office will implement an external audit. Procedures must be specific for selecting the pool, assigning the auditors to specific decisions to be serviced, securing specified reports from them, providing them with access to key decision-makers whenever they believe an intervention is warranted, and insuring that audit reports will reach appropriate audiences. As the DRDR office of evaluation confronts this task, it needs to draw heavily on the experience developed in the Title VII and Title VIII programs of the Elementary and Secondary Education Act of 1965 in the Bureau of Elementary and Secondary Education. Consultants might expedite DRDR's development of a system to provide adequate external audits for its evaluation and decision-making systems.

-- Assignment of judges to reading and site-visit tasks. Intermediate-level evaluators responsible for providing recommendations regarding specific decisions will also be responsible for assigning judges to reading and site-visit tasks when necessary. And these intermediate-level evaluators will arrange appropriate site visits.

The assignment of site visitors will be in accordance with procedures specified in chapter five. This selection will occur annually as soon as the "DRDR Annual Projection of Decisions and Associated Information Requirements" has been completed.

-- Orientation and instruction of the expert judges. The intermediate-level evaluator who assigned the expert judges to their tasks must also insure that they meet their responsibilities. This will include orientation to specific reading and site-visit procedures (see chapter five), explication of the decision situation to be serviced, assignment of documents to be read and sites to be visited, and provision of guidelines and instruments by which the judges will perform their rating function.

Reading assignments will be made especially in reference to decisions 1, 3, and 5, while site-visit assignments will be made especially in relation to decisions 2, 4, and 6. Either or both the reading and site-visit procedures may be applied, based upon DRDR decision makers' request, to decisions 7, 8, and 9. The timing of the reading and site-visit assignments will be projected in accordance with the "DRDR Annual Projection of Decisions and Associated Information Requirements."

-- Preparation of institutions for site reviews. The same intermediate-level DRDR evaluators who made site-review assignments will assist the institutions to be visited. These institutions will be presented with the basic criteria to be applied by DRDR decision-makers in reaching a decision pertaining to the institutions, names of site reviewers, guidelines to use in providing data to the site reviewers, the instruments the site reviewers will be using in applying the specified criteria, a suggested set of dates for the site reviews, as well as a time when the decisions that are the subject of the site reviews must be made. Guidelines for site visits will be provided to the institution at least six months prior to the projected decision-date.

-- Coordination of site reviews. The intermediate evaluators who arrange site reviews will observe them and assist in their conduct according to the specified procedures (see chapter five). And especially, the intermediate-level evaluator will monitor the site-visit proceedings to insure that they meet their objectives.

The above discussion of tasks indicates that DRDR must have three levels of evaluation staff: administrative, intermediate, and paraprofessional. Further, the intermediate-level staff must serve four distinct areas of responsibility: maintaining liaison with the external technical-service agencies; obtaining basic data: analyzing reports from the technical-services agencies; and maintaining liaison with the external auditor. (Later in this chapter an organizational breakdown will be provided for the staffing of the DRDR evaluation office.)

Expert judges. As discussed in chapter five, the proposed evaluation and decision-making system will depend heavily for evaluative data on a large, well-defined and specially qualified group of expert judges. Such judges will be selected for their qualifications that relate to given strata associated with criteria to be applied in the ten decision-situations.

Two basic strata are to be considered here. The first pertains to institutional criteria; the second applies to the substance of the program. The breakdown of criteria elsewhere in this report for programs versus institutions helps classify the qualifications of the expert judges. After judges have been selected and systematically assigned within strata, they will be assigned to specificed review-tasks according to the systematic procedure specified in chapter five. After assignment, the judges will adhere to the specified procedures for reviewing proposals and reports and for participating in site reviews. Essentially, they will produce rankings of institutions' programs and/or proposals in terms of specified criteria, given guidelines, and instruments. (Suggested guidelines and instruments appear in appendix A.) The output of the expert judges, therefore, is not to be taken as the complete judgmental job, but rather as the provision of judgmental data that will be further analyzed (by a specified outside technical-services agency) before rank-order decisions can be made by DRDR officials.

Four specific tasks of the expert judges can be derived from the proposed model for evaluation and decision making.

-- Judgments of proposals and reports. As specified in chapter five, judges - after assignment to reading tasks - will receive and read proposals and reports and then rate them according to the guidelines that appear in appendix A. This rating responsibility pertains especially to decisions 1 - 6 and 8. Scheduling of the distribution of reports and obtaining of rankings from the judges will be projected annually in accordance with the "DRDR Annual Projection of Decisions and Associated Information Requirements."

-- Evaluation reports. In accordance with specified guidelines, expert judges will prepare and submit reports to DRDR that contain the judges' findings concerning the relative strengths and weaknesses of the reports and proposals. Such reporting will be done in accordance with the requirements of the structured guidelines presented in appendix A.

-- Site reviews. The expert judges will participate in site reviews according to the procedures specified in chapter five. Also, it is recommended that an outside service agency (e.g., Educational Testing Service) continually work on the refinement of selection procedures as well as the implementation of the associated basic data-gathering. Site reviewers for given agencies will be the judges that have read the proposals or reports that preceded the site visit.

-- Site-review reports. Judges will prepare and submit reports based on their site reviews and previous document-reading in accordance with the chapter five procedures and the appropriate guidelines for both the reading and site visits conducted. These reports, usually pertaining to decisions 2, 4, and 6, will provide explicit ranks for the main criteria noted in the report guidelines. When possible, the site visitors will provide comments that support the given rank. The visitors also must realize that their ranks will be tested with the ranks of other independent judges for reliability and validity and that such information will be taken into account, along with the judges' ranks, in the making of decisions. (Judges, throughout their site review and reading roles, must act independently rather than reaching a consensus with other judges.)

External technical-services agency. DRDR does not have the analysis capability and technical expertise required for instrument development, the development of complex analytic procedures required for rank ordering of proposals and reports, and the implementation of complex analysis procedures. Therefore, it is suggested that outside agencies (e.g., Educational Testing Service, Resource Management Corporation, and the Iowa Educational Information Center) be given both continuing and short-term contracts for the development/

refinement, and implementation of data gathering and analytic procedures that can result in reliable ranking of reports. Three specific tasks are apparent in the proposed model for evaluation and decision making that must be performed by an outside agency.

-- Development of analytic procedures. Chapter five suggests analytic procedures to be followed in rank-ordering proposals and reports. However, development and refinement of such procedures must be a continuing process, especially with respect to continually seeking to provide more reliable and valid instruments. An institution might well provide systematic service to DRDR for the development of sound data-gathering instruments and procedures for implementation of the proposed evaluation and decision-making system. Also, as experience is gained with the instruments and procedures suggested in this report, the analysis of data can be used not only to help DRDR but also to assist in the refinement of the instruments used to gather the original data. Thus refinement of procedures could be a routine side-benefit.

-- Development of a pool of expert judges. Institutions with technical-service capabilities will be engaged to identify and propose the pool of expert judges. Further, such institutions could develop a procedure for systematically defining the panel of expert judges in such a way that criteria gleaned from guidelines for ranking proposals and reports and judging institutions and programs based on site visits could be employed to select judges from appropriate strata within the overall pool of judges. This is a vital role to be performed; consequently, it is urged that DRDR let an outside contract for performance of these tasks.

-- Conduct of special analyses for external auditors. Since the proposed evaluation and decision-making system requires the involvement of external auditors, it is anticipated that auditors at times will question the accuracy or completeness of analyses performed by the external technical-services agencies in respect to the ranking of reports and proposals. The auditor may call for a special kind of analysis or even a reanalysis report. Both the original analyses and the reanalysis report are most likely to occur with respect to decision types 2, 4, and 6.

Evaluation auditors. The role of the evaluation auditor is defined in chapter five. Auditing assignments are made by the DRDR decision-makers; consequently, the auditors must have continuing access to DRDR data and personnel to meet their responsibilities. Generally the auditor should be encouraged to make audit exception reports at any time. And more than that, the DRDR evaluation specialist will structure the auditor's role so that systematic reporting can be done after the submission of evaluation reports by the analysis agency and following decisions reached in DRDR. No specific task for the auditor appears within the proposed model for evaluation and decision making since the auditor is supposed to monitor the entire evaluation and decision-making process. The technical procedure for selecting and assigning auditors to serve specified evaluation needs to be worked out. However, chapter five recommends a process that DRDR might follow in designing and implementing its audit system.

Institutional decision-makers. Institutional decision makers obviously play a key role in the proposed evaluation and decision-making system. They prepare and submit the basic proposals and reports for most DRDR decisions; they maintain internal evaluation mechanisms that supply the data contained in the proposals and reports; and finally, they assist in the coordination of site reviews. Institutional decision makers assumedly include the directors of the institutions as well as their designated representatives.

-- Proposals and reports. Institutional decision-makers not presently administering DRDR funds may respond to special requests for proposals sent out by DRDR, as in the case of decisions 1 and 5. Institutional decision makers already possessing funds from DRDR must respond to its requests for reports concerning presently funded activities and may respond to requests for proposals for the allocation of further funds.

-- Resubmission of reports or proposals. When DRDR evaluators or decision makers find that the information provided in required proposals or reports to DRDR is inadequate, the institutional decision-makers who submitted the proposals or reports must rectify the deficiencies and resubmit them. This is mandatory in the case of required reports and voluntary in the case of proposals. As noted in chapter two, proposals first judged incomplete or inadequate will not be considered for funding until information deficiencies in those documents are rectified by submitting institutions. The institutional decision maker's responsibilities in the area of reports and proposals occur mainly with respect to decisions 1 - 6, and 9.

-- *Coordination of the site review*. Decisions 2, 4, and 6 require institutional decision makers to work with DRDR evaluators in planning and conducting site reviews. The reviews will be mainly under the direction of DRDR. Also, DRDR decision makers will organize and coordinate site reviews concerning decision 7. But in the latter situation, institutional decision makers will be in charge of organizing and conducting the site reviews.

Institutional evaluators. Evaluation offices and personnel within agencies supported by DRDR, as well as those with potential DRDR support, play a fundamental role in the proposed evaluation and decision-making system for the division. These evaluation agencies will supply most of the basic data required for the system's implementation.

It is expected that DRDR-supported institutions will possess evaluation capabilities in four main areas. First, they will be able to present data that support the objectives of the institution. Second, they will be able to present data that justify the procedural plans adopted for the achievement of institutional objectives. Third, they will be able to provide data that reflect the extent to which planned procedures are being implemented. And finally, they will be able to present data on the extent to which the institution's objectives are being achieved. Moreover, within this basic framework of information capabilities the institutional evaluators will be able to respond to the specific data requirements associated with decisions 1 - 7 and 9.

Four specific tasks are observed in the proposed model for evaluation and decision making to be served by the institutional evaluators.

-- Provision of data needed for proposals and reports. As already noted, the institutional evaluators will provide the basic data required for proposals and reports that pertain to decisions 1 - 7 and 9. These evaluation data must be in accordance with the associated sets of guidelines that appear in appendix A.

-- Provision of any missing information. When reports or proposals are returned from DRDR, the institution's decision maker will rely heavily on his internal evaluation-personnel for the rectification of the information deficiencies that had been identified in the submitted proposal or report.

-- Preparation of data for site reviews. Institutional evaluators will prepare data to answer the basic questions that appear in the guidelines (as found in appendix A) for site reviews. The decisions of most importance are 2, 4, and 6.

-- Provision of data at the site review. During the conduct of site reviews for decisions 2, 4, 6, or 7 (since the institution will be in charge of site reviews for decision 7), the internal evaluator will need to be available to interpret data provided, substantiate its accuracy, and supply any missing components.

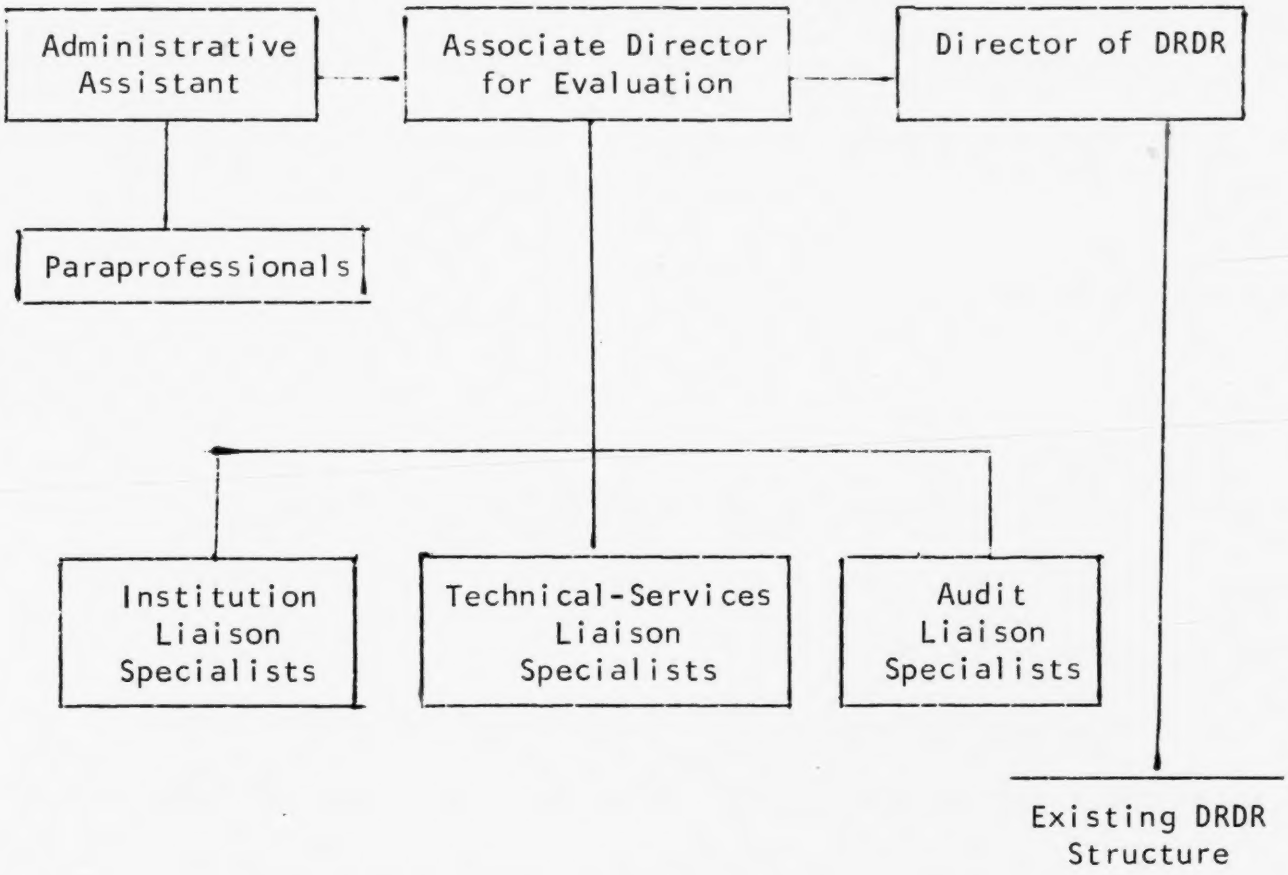
Since the proposed system for evaluation and decision-making within DRDR depends so heavily on the submission of basic data from Institutions, DRDR must support strongly the establishment of evaluation offices in the institutions it sponsors.

DRDR Evaluation Office

In the preceding section numerous tasks were identified as being the responsibility of personnel in the DRDR evaluation office. This section groups the evaluation tasks into several jobs within an overall organizational framework.

Figure 3 indicates that the evaluation office of DRDR will be a staff office to the director of DRDR, with the associate director for evaluation (who heads the DRDR evaluation unit) reporting directly to the division director. An administrative assistant serves in a staff relationship to the associate director for evaluation, while three kinds of specialists report in a line relationship to the associate director. The latter are the audit liaison specialists, the technical-services liaison specialists, and the institution liaison specialists. Also, paraprofessional evaluators are shown to report to the administrative assistant. The three kinds of evaluation specialists have been identified so as to group all responsibilities in relationship to the client served.

Figure 3
Proposed Organizational Chart


Administrative Assistant
Associate Director for Evaluation
Director of DRDR
Paraprofessionals
Institution Liaison Specialists
Technical-Services Liaison Specialists
Audit Liaison Specialists
Existing DRDR Structure

Institution liaison specialist. Institution liaison specialists will perform all tasks associated with the gathering of data from field DRDR-supported institutions. These specialists will distribute guidelines for proposals and reports and plan and coordinate their reading by expert judges. Further, the specialists will assess the validity of proposals and evaluation reports submitted by institutions. The will inform institutions of criteria, names of site reviewers, data-gathering guidelines the site reviewers will be using, dates for the site visits, and dates for decisions to be reached. And they will insure that site visits and reading procedures are implemented appropriately.

Personnel performing this role must have a working knowledge of measurement as well as strong organizational and interpersonal-relations skills. Persons with backgrounds in educational measurement and sociology should be given preference in the staffing of these roles.

Audit liaison specialist. The audit liaison specialists' job will encompass all activities associated with providing liaison between the DRDR evaluation-office and the external auditors. These specialists will assign auditors to audit responsibilities in accordance with the procedures specified in chapter five; they will provide orientation to the auditors and will supply them with a continuing flow of pertinent data. They also will convey the auditors' reports to the appropriate personnel and will assist in cases where the auditor has asked for new analyses or reanalyses of data.

Personnel with a good working knowledge of evaluation methodology would be most desirable for performance in this liaison role.

Technical-services liaison specialist. The job of the technical-services liaison specialist will encompass all of the activities associated with securing specially contracted, outside technical services to support the data collection and analysis associated with decisions 2, 4, and 6. Persons in this role will work on the continual refinement of basic data-gathering instruments and the associated analysis procedures. They will seek to effect contracts with appropriate technical service agencies (e.g., Educational Testing Service) and will work with them to implement the basic data-analysis required for rank ordering of proposals and reports. Further, the technical-services liaison specialist will analyze data reports from the technical-services agency in the context of funding constraints and will provide recommendations to the associate director for evaluation and DRDR decision-makers regarding the approval of proposals and reports.

Personnel to implement this role should have a strong background in mathematical statistics and economics. While they probably need training only at the master's-degree level if their specialization has been mathematical statistics, these people must be able to systematically supervise businesslike relationships with outside funding agencies.

Associate director for evaluation. The associate director for evaluation will report directly to the division director and will work closely with him and other DRDR decision-makers to insure that the evaluation system remains strong in its support of decisions. The role is both administrative and interface. Administratively the associate director must insure that his staff functions efficiently and effectively with respect to all of their evaluation responsibilities. Staff development will be an important concern; especially, he must insure that the paraprofessionals and the three kinds of evaluation specialists receive special instruction with respect to implementation of their roles. Also, adequate training must be provided for the expert judges if they are to implement the data-gathering methodology, continually under refinement.

Administrative assistant. An administrative assistant will report to the associate director for evaluation. This assistant will attend to administrative details associated with efficient operation of the evaluation office and will supervise the work of paraprofessionals.

The person in this role might have a bachelor's degree in business administration. He needs a general working knowledge of evaluation procedures, but more importantly he needs skills in the areas of management and business practice.

Paraprofessionals. Paraprofessionals will be assigned to assist the evaluation specialists. Paraprofessionals' tasks include checking reports and proposals for completeness against guidelines, processing incoming and outgoing documents, coding data, and performing inhouse analysis tasks.

A high-school education should be sufficient for adequate performance of this role. Regardless, the office of evaluation will provide the necessary training for a person of average intelligence to implement the role of the paraprofessional.

Funding of the Proposed Evaluation System

Tables 3 and 4 will aid DRDR decision-makers in projecting costs associated with implementing the proposed evaluation system.

Table 3 shows an approximate unit number of man-days for each decision-situation. The time is based on allowing one day to read and critique a report, and three days are allowed to conduct a site visit, two days for the visit and one day for compiling a report. Columns (1) and (2) estimate the number of DRDR evaluation and DRDR-paraprofessional man-days required per proposal or report. Columns (3) and (4) show the number of readers and reader man-days required per proposal or report for each decision; these columns are identical since the reading of each proposal will require one day per judge. Columns (5) and (6)

Table 3

Man-Days of DRDR Evaluators and Expert Judges Needed for Ten Decision Situations

Decisions	(1) DRDR Professional Evaltr. days	(2) DRDR Para-Prof. Evaltr. days	(3) Readers	(4) Reader days	(5) Visitors	(6) Visitor days	(7) Total Visitor plus Reader days
1	.5	.25	3	3			3
2	3	.50	3	3	3*	9**	12
3	3	.75	3	3	3	9	12
4	4	.75	5	5	5	15	20
5	1	.50	3	3			3
6	4	.25	5	5	5	15	20
7	1						
8	4	.25	5	5	5	15	20
9	1	.50	3	3			3
10	.5						

* Three site visitors are used for Decision 2 situations. Each is allowed two days for the visit and one day to produce a report. Some proposals may be eliminated after judges read the proposals; hence, a site review will be unnecessary. The number of trips can be based on the number in the "Number of Visitors" column to calculate travel costs for judges.

** Required only when warranted by special circumstances.

present the number of visitors and visitor days, assuming three days per visitor, per proposal or report. Column (7) estimates the combined visitor and reader days required per report or proposal for each of the ten decisions. Columns (1) and (7) reveal that decisions 4, 6, and 8 require the most extensive evaluations per decision alternative under consideration, while decisions 2 and 3 follow closely.

For the figures in Table 3 to have practical meaning it is necessary to know the number of decision alternatives to be assessed for each decision type. For budgetary planning such projections must be made at least on an annual basis. In the proposed evaluation system, projections of the number of each type of decision to be made during a given year takes operational form in the "DRDR Annual Projection of Decisions and Associated Information Requirements". Given the number of each type of decision to be made during a given year, the contents of Table 3 can be used to project the number of DRDR evaluator and expert judge man-days required.

Table 4 illustrates how man-days can be projected for one year. Based upon discussions with a DRDR representative, estimates were made of the number of each type of decision that will be made in DRDR during the next year.[1] The estimates appear in Column (0). Columns (1) - (7) estimate the DRDR evaluator

---

[1] The precision of these estimates is not crucial here because they are being used only for illustrative purposes; if the proposed system becomes operational, such projections will be derived from the "DRDR Annual Projection of Decisions and Associated Information Requirements".

Table 4

Man-Days for an Assumed Typical Year

Decisions	(0) Estimated No. of Decisions	(1) DRDR Evaluator days	(2) DRDR Para-Prof. days	(3) No. of Readers	(4) Reader days	(5) No. of Visitors	(6) Visitor days	(7) Total Visitor and Reader days
1	50	25	12	150	150			150
2	9	27	5	27	27	27	81	108
3	3	9	2	9	9	9	27	36
4	3	12	3	15	15	15	45	60
5	30	30	15	90	90			90
6	9	36	2	45	45	45	135	180
7	75	75						
8	3	12	1	15	15	15	45	60
9	10	10	5	30	30			30
10	25	13						
		249	45	381	381	111	333	714

Note: Decision 7 should occur throughout the year; decision 10 now occurs during two months; an effort should be made to schedule types 1, 2, 5, and 6 at least three months apart during the year to avoid peak loads on DRDR evaluation staff and expert judge man-days required per decision type, given the projections in column (0). Entries in columns (1) - (7) of Table 4 were calculated by multiplying the corresponding entries from columns (1) - (7) of Table 3 times the number of decisions entered in column (0) of Table 4.

Table 4 assumed that fifty type 1-decisions will be made in a given year. These will require 25 man-days from DRDR professional evaluators, 12 man-days from the DRDR paraprofessional evaluators, and 150 man-days from the expert judge readers. Accordingly, the remainder of the table can be read for each decision.

In general, under the given assumptions, a full-time masters-level person can manage the institutional-liaison role if the time is spread out linearly. If not, extra personnel will have to work in this category when peak loads exist. Since the assumptions dictate that the paraprofessional evaluator will work 45 man-days, this role can be combined for the present with that of a full-time administrative assistant.

Additional evaluation staff will be required continually to develop and administer the new evaluation system and to assist DRDR to make use of the system's evaluative outputs. Also, the evaluation staff surely will be called upon to prepare summaries of data and papers in response to DRDR planning needs, to conduct special studies, and to answer requests from government offices and Congress.

Given the analysis of Table 4 and the additional core staff needs identified above, funds should be available for the following:

Staff

1 director
1 administrative assistant/paraprofessional evaluator
1 institution liaison specialist
1 technical services liaison specialist
1 audit liaison specialist
2 secretaries

Other

714 days for judges (@ $150)
30 days for clerical (@ $30)
Contract services for the development of instruments and analysis procedures
Contract services for analysis (13 batches)
Travel for judges (120 trips @ $250)
Other staff-support costs (e.g. travel)
Contract services for developing the audit system
Evaluation auditors (50 days annually @ $150)
Training for 50 expert judges ($2,000)

The analysis in Table 4 assumes a more efficient system than exists in a federal office. Factors such as slow mail service, the need to divert personnel from evaluative tasks to political chores, constantly rotating staff, the reality of peak loads at certain times, etc., require that more man-days and resources be allocated than indicated in this analysis. This is especially true in the case of the institution liaison specialists and the paraprofessionals. However, after the initial operationalization of the system, the technical services liaison specialist and the audit liaison specialist will not be required full-time for their main responsibilities. Hence, during peak periods these specialists can be detailed to assist the institution liaison specialist and the administrative assistant.

Overall, funding according to the preceding analysis is believed to provide a realistic basis for launching the proposed evaluation system.

VII

Recommendations

If DRDR adopts the evaluation system proposed in this report, the following recommendations are offered:

-- The DRDR evaluation-office should be staffed in accordance with the recommendations that appear in chapter six.

-- The evaluation office, in conjunction with DRDR decision-makers, should prepare a "DRDR Annual Projection of Decisions and Associated Information Requirements." This document provides the basic point of reference for all subsequent evaluation activities.

-- DRDR should train its staff to implement the general system model described in chapter two.

-- DRDR should standardize site visits according to the procedures described in chapter five.

-- DRDR should immediately employ the sets of guidelines that appear in appendix A.

-- A contract should be let with an external technical-services agency for the development of instrumentation and data analysis.

-- A contract should be let for selecting and training expert judges.

-- A contract should be let for developing and operating the proposed audit system.

-- DRDR should encourage the establishment of strong evaluation offices in the research and development institutions because those institutions provide the majority of basic data for the DRDR evaluation system.

-- DRDR should announce the intention and operational characteristics of the new evaluation system and seek to build credibility and acceptance for the system.

-- DRDR should appoint an advisory panel to assist with the development, evaluation, and implementation of the evaluation system.

The team that prepared this report is willing to collaborate further with DRDR by providing assistance in the operationalization, implementation, and improvement of the proposed evaluation approach. The team agrees that the proposed evaluation approach can work. What remains now is for DRDR to choose an evaluation strategy, to relate it effectively to the new support policy, and to implement both.

Appendix A

Guidelines for Applicants & Judges

Decision 1

U. S. Office of Education
National Center for Educational Research and Development
Division of Research and Development Resources

Guidelines for Planning Grant Applications for New Research and Development Institution in Education

Applicants for planning grants must organize their proposals according to the following sequence. The instructions contain the criteria on which proposals will be judged; consequently, all information requested must be supplied.

The various sections of the proposal will be evaluated according to the following system of weighting.

	Section	Weight
I.	New R & D Capability	3
II.	Mission or Problem Area	3
III.	Work Plan	4
IV.	Personnel	4
V.	Geographic Location	2
VI.	Relations with Other Institutions, Agencies, and Organizations	1
VII.	Financing	2

I. New R & D Capability

A. Explain how the creation of the proposed institution will make a distinct or unique contribution to research and development capability in education -- a capability not already available in existing institutions -- or how it will significantly extend or improve what existing institutions can do.

1. Describe the distinction in mission or problem area that will set the proposed institution apart in its substantive program.

2. Describe any distinct role the proposed institution will play in its geographic area.

B. Describe sources of funding besides the U. S. Office of Education that might assist either in establishing the institution or funding specific programs once the institution is established.

II. Mission or Problem Area

A. Indicate the problems, needs, or opportunities that will guide the institution in setting its mission.

B. Outline the problem area and explain the mission in terms specific enough to provide focus yet general enough to justify long-range programmatic work.

C. Identify the target pupil populations, demographic areas, and economic settings of the proposed work.

D. Indicate whether the outcomes of the program will be national as well as regional in eventual impact.

E. Discuss the theoretical framework or rationale for the proposed work; or supply a review of relevant literature; or provide background data; or describe the discrepancy between current conditions and desired conditions; or cite special characteristics of the geographic area; or otherwise support the view that the proposed mission needs to be performed.

F. Discuss the extent to which the mission is in keeping with generally accepted educational values.

G. Explain how research and development activities will satisfactorily deal with the problems, needs, or opportunities identified.

H. Relate the mission or problem area to priorities in education.

1. Describe the relationship to educational priorities recently expressed by the President; the Department of Health, Education, and Welfare; the U. S. Office of Education; the National Center for Educational Research and Development; or the Division of Research and Development Resources.

2. Describe the relationship to educational priorities expressed by other leading individuals, organizations, and agencies.

3. In the absence of any demonstrable relationship to priorities expressed by government officials or other national figures, develop the argument that the selected problem area is nonetheless significant and merits support.

4. Discuss the likelihood that the work will continue to be significant in the future, even if priorities shift.

5. Discuss the significance in social and economic terms, as well as from an educational point of view.

III. Work Plan

A. Specify in precise terms the scope of work to be performed.

B. List the critical questions that must be answered to achieve the objectives of the planning grant.

C. Identify the formal or informal planning techniques to be used.

D. Supply a careful description of the mechanism to be used for specifying the mission of the institution within its chosen problem area. Indicate the capabilities of the people who will specify the mission and explain how they will make their final decision about the mission.

E. Include a carefully worked out design for identifying, examining, rating, and choosing among alternative procedures for carrying out the mission of the institution. Provide sufficient information to assure that alternatives will be thoroughly considered and final choices soundly made.

F. Delineate the procedures for using evaluation techniques to assess and to guide the planning process.

G. Explain how the planners will divide the planning tasks among themselves.

   1. Explain the method for allocating tasks.

   2. Demonstrate that a match exists between tasks assigned and competence to do them.

   3. Display a schedule for the use of the planning personnel showing their availability to carry out tasks in a planned series and to finish the work on time.

H. Supply a complete schedule for the planning tasks.

   1. Supply starting points, milestone points, and ending points for major segments of the work.

   2. Justify the schedule, given the scope-of-work statement.

IV. Personnel

A. Identify the person who will lead the planning effort.

   1. Describe his competency for this task.

   2. Indicate the amount of time he will devote to the work and the degree of responsibility he will accept.

B. Describe the organizational structure and the work pattern to be used by the planning group.

   1. Explain the use of teams, committees, or task groups, indicating how they will be led and interrelated.

   2. Indicate the amount of time and degree of involvement for each member of the planning group.

C. Characterize the personnel.

   1. Supply data to show they have both competency and relevant experience.

   2. Discuss the kind and number of personnel needed to carry out each task. Demonstrate that a critical mass of talent is available.

D. List the classifications of personnel who will assist with the planning.

   1. Show that contributions from persons in the substantive disciplines will be made wherever relevant.

2. Show that talent from technical fields such as planning, evaluation, and data processing is available.

3. Show that sufficient specialty in both research and development is present within the planning group.

4. Show that the ultimate clients of the institution, such as school systems, are represented among the planners.

5. Show that key audiences for the work of the institution, such as members of state legislatures or key public figures, are involved in the planning.

V. Geographic Location

A. Describe the geographic location of the proposed institution and its accessibility.

B. Discuss what the location implies for the ability of the institution to cooperate with other organizations engaged in similar or related work.

C. Discuss what the location implies for the ability of the institution to attract and retain capable staff members.

VI. Relations with Other Institutions, Agencies, and Organizations

A. Indicate what formal sponsorship or affiliation the proposed institution will have with existing institutions, agencies, or organizations.

B. If the applicant has endoresments of the proposal from other institutions or groups, these may be displayed. Indicate whether the proposed work emerges out of work previously done in the endorsing institutions or groups.

C. Explain what services will be required from other agencies. Give evidence to certify that they will be available.

D. Describe, and if possible supply data on, the attitudes held by others who might ultimately impede the work of the proposed institution or interfere with its accomplishments.

VII. Financing

A. Supply a detailed budget for the planning effort.

1. Specify the costs of personnel, equipment and materials, special services, travel, communications, and space rental.

2. Demonstrate that the proposed budget is sufficient to carry out the scope of work.
3. Identify those points at which the budget might be reduced without impeding the planning.

B. Describe the fiscal system to hold, disburse, and account for funds.

1. Discuss the practicality of the fiscal system from the point of view of the planners.
2. Supply assurances and guarantees of fiscal responsibility on the part of the fiscal agent.

C. Describe other resources that will support the planning effort.

Decision 1

U. S. Office of Education
National Center for Educational Research and Development
Division of Research and Development Resources

Guidelines for Judges of Planning Grant Applications for New Research and Development Institutions in Education

Judges must assess proposals for planning grants according to their compliance with the criteria contained in the following set of questions. The questions are organized to parallel the sequencing the applicants followed in writing their proposals. All questions must be answered.

The various sections of the proposal will be evaluated according to the following system of weighting.

	Section	Weight
I.	New R & D Capability	3
II.	Mission or Problem Area	3
III.	Work Plan	4
IV.	Personnel	4
V.	Geographic Location	2
VI.	Relations with Other Institutions, Agencies and Organizations	1
VII.	Financing	2

I. New R & D Capabilities

A. Will the creation of the proposed institution make a distinct or unique contribution to research and development capability in education--a capability not already available in existing institutions--or will it significantly extend or improve what existing institutions can do?

1. Does any distinction in mission or problem area set the proposed institution apart from others in its substantive program?

2. Will the proposed institution play any distinct role in its geographic area?

B. Are there sources of funding besides the U. S. Office of Education that might assist either in establishing the institution or funding specific programs once the institution is established?

II. Mission or Problem Area

A. Do clearly identified problems, needs, or opportunities guide the institution in setting its mission?

B. Is the problem area outlined and the mission explained in terms specific enough to provide focus yet general enough to justify long-range programmatic work?

C. Are significant pupil populations, demographic areas, and economic settings singled out as targets for the proposed work?

D. Will the outcomes of the work be national (as well as regional) in eventual impact?

E. Is there a sound theoretical framework or rationale for the proposed work; or a persuasive review of relevant literature; or relevant and important background data; or a convincing accounting of a discrepancy between current conditions and desired conditions; or special characteristics of the geographic area that demand attention; or other evidence that the proposed mission should be performed?

F. Is the mission in keeping with generally accepted educational values?

G. Can research and development activities deal satisfactorily with the problems, needs, or opportunities identified?

H. Is the mission or problem area related to priorities in education?

  1. Is it related to educational priorities recently expressed by the President; the Department of Health, Education, and Welfare; the U.S. Office of Education; the National Center for Educational Research and Development; or the Division of Research and Development Resources?

  2. Is it related to educational priorities expressed by other leading individuals, organizations, and agencies?

  3. In the absence of any demonstrable relationship to priorities expressed by government officials or other national figures, is the selected problem area nonetheless significant enough to merit support?

  4. Will the work continue to be significant in the future, even if national priorities shift?

  5. Will achieving the proposed mission be significant in social and economic terms, as well as from an educational point of view?

III. Work Plan

A. Is the scope of work specified in precise terms?

B. Are the questions to be answered critical to achieving the objectives of the planning grant?

C. Will the proposed formal or informal planning techniques lead to successful completion of the scope of work?

D. Will the mechanism proposed for specifying the mission of the institution within its chosen problem area lead to a focused statement of an important, authenticated mission? Are the people who will specify the mission competent to work within the proposed mechanism and to make the needed decision?

E. Is the design for identifying, examining, rating, and choosing among alternative procedures for carrying out the mission of the institution carefully worked out? Does it provide sufficient information to assure that alternatives will be thoroughly considered and final choices soundly made?

F. Will the proposed evaluation techniques effectively assess and guide the planning process?

G. Will the best possible division of tasks among the planning personnel be effected?

  1. Will the method for allocating the tasks work in actual practice?

  2. Will there be a close match between tasks assigned and competence to do them?

  3. Will the planning personnel conduct their tasks in a planned series and finish the work on time?

H. Is the schedule for the planning tasks balanced and complete?

  1. Does it supply precise starting points, milestone points, and ending points for major segments of the work?

  2. Is the schedule closely related to the scope-of-work statement?

IV. Personnel

A. Will the person who will lead the planning effort be effective?

  1. Is he competent for this task?

  2. Will he give enough time to, and take enough responsibility for, the work?

B. Are the organizational structure and the work pattern to be used by the planning group appropriate for the task?

  1. Will the best possible use be made of the proposed work groups?

  2. Will the amount of time and degree of involvement for each member of the planning group be adequate to the task?

C. Are the personnel properly selected for the work?

  1. Will the personal competence and relevant experience of each lead to successful completion of the planning effort?

  2. Will a critical mass of specified talents be available?

D. Will an adequate range of personnel assist with the planning?

1. Will contributions from persons in the substantive disciplines be made wherever relevant?

2. Will talent from technical fields such as planning, evaluation, and data processing be available?

3. Will sufficient specialty in both research and development be present within the planning group?

4. Will the ultimate clients of the institution, such as school systems, be represented among the planners?

5. Will key audiences for the work of the institution, such as members of state legislatures or key public figures, be involved in the planning?

V. Geographic Location

A. Will the proposed institution be easily accessible to both clients and outsiders?

B. Will the geographic location enable the institution to cooperate with other organizations engaged in similar or related work?

C. Will the location enable the institution to attract and retain capable staff members?

VI. Relations with Other Institutions, Agencies, and Organizations

A. Will formal sponsorship by or affiliation with existing institutions, agencies, or organizations contribute to the success of the proposed institution?

B. Do endorsements of the proposal from other institutions or groups contain promises of substantial assistance to the institution? Do endorsements come from people qualified to judge the proposed work?

C. Will services required from other agencies be available?

D. Given its selected mission and program, is the proposed institution likely to achieve a mutually supportive relationship with outside agencies and groups?

VII. Financing

A. Is the budget for the planning effort carefully prepared?

    1. Is it complete?
    2. Is it sufficient?
    3. Is it limited to what is required?

B. Is the fiscal system complete and carefully devised?

    1. Is it easy to use?
    2. Are adequate assurances and guarantees of fiscal responsibility on the part of the fiscal agent supplied?

C. Are other resources available to support the planning effort?

Decision 2

U.S. Office of Education
National Center for Educational Research and Development
Division of Research and Development Resources

Guidelines for New Institution Applications for Recipients of Planning Grants for New Research and Development Institutions in Education

Recipients of planning grants must perform the following tasks in preparing a proposal for the creation of a new research and development institution. These instructions contain the criteria on which proposals will be judged; consequently all information requested must be supplied.

The various sections of the grants will be evaluated according to the following system of weights:

	Section	Weight
I.	Mission or Problem Area	4
II.	Management	4
III.	Personnel	4
IV.	Planning and Evaluation System	3
V.	Program Coordination and Balance	1
VI.	Research Activities	2
VII.	Development Activities	2
VIII.	Relations with Other Institutions, Agencies, and Organizations	1
IX.	Schedule	3

X.	Facilities	1
XI.	Financing	2
XII.	Communication	1

Summary of Selected Information Contained in Original Application for Planning Grant

The following information may be drawn from the original planning grant proposal and summarized briefly; or as an alternative, the proposal may be attached and the location of the following information indicated. In either case, any changes made since the original application was filed must be noted.

1. Explain how the creation of the proposed institution will make a distinct or unique contribution to research and development capability in education--a capability not already available in existing institutions--or how it will significantly extend or improve what existing institutions can do.
    a. Describe the distinction in mission or problem area that will set the proposed institution apart in its substantive program.
    b. Describe any distinct role the proposed institution will play in its geographic area.
2. Describe funding sources in addition to the U.S. Office of Education that might be able to assist either in establishing the institution or funding specific programs once the institution is established.
3. Justify the assertion that the problems, needs, or opportunities identified can be dealt with satisfactorily through research and development activities and cannot be better approached by other means.
4. Describe the relationship between the proposed work and what has been accomplished previously or is currently under way elsewhere.
5. Explain why the mission or programs of the institution require long-range programmatic research and development in an institutional setting and cannot be handled satisfactorily through the support of single projects.
6. Describe the procedures used for identifying, examining, rating, and choosing among alternative procedures

that might have been used to carry out the mission of the institution. Include sufficient information to give assurance that the consideration of alternatives was thorough and that the final choices were sound.

7. Describe the geographic location of the proposed institution and its accessibility.

    a. Discuss what the location implies for the ability of the institution to cooperate with other organizations engaged in similar or related work.

    b. Discuss what the location implies for the ability of the institution to attract and retain capable staff members.

8. Indicate what formal sponsorship or affiliation the proposed institution will have with existing institutions, agencies, or organizations.

9. Describe, and, if possible, supply data on the attitudes toward the proposed institution held by others who might ultimately impede its work or interfere with its accomplishments.

New Tasks to Be Performed

Although several of the following tasks may have been performed in writing the original application for a planning grant, a more elaborate and careful restatement of them is expected from actual recipients of planning grants. Quoting the original application is not sufficient for these tasks. Inasmuch as the instructions below contain the criteria on which proposals will be judged, the steps must be carried out as described in this work statement.

1. Mission or Problem Area

    A. Clearly specify the problems, needs, or opportunities that will guide the institution in setting its mission.

    B. Delineate the problem area and explain the mission in terms specific enough to provide focus yet general enough to justify long-range programmatic work.

C. Describe the pupil populations, demographic areas, and economic settings that are the targets of the proposed work.

D. Authenticate the problems, needs, or opportunities by presenting a theoretical framework or rationale for the proposed work; or supply a thorough review of relevant literature; or delineate the discrepancy between current conditions and desired conditions; or cite special characteristics of the geographic area; or otherwise establish conclusively that the proposed mission needs to be performed.

E. Present data to demonstrate that the mission for the proposed institution is necessary and significant.

F. Discuss the extent to which the mission is in keeping with generally accepted educational values.

G. Indicate whether the outcomes of the program will be national as well as regional in eventual impact.

H. Demonstrate that the objectives specified for the institution, when taken as a whole, provide a coherent basis for the establishment of program plans.

I. Justify the assertion that research and development activities will satisfactorily deal with the problems, needs, or opportunities identified.

J. Relate the mission or problem area to priorities in education.

   1. Describe the relationship to educational priorities recently expressed by the President; the Department of Health, Education, and Welfare; the U. S. Office of Education; the National Center for Educational Research and Development; or the Division of Research and Development Resources.

   2. Describe the relationship to educational priorities expressed by other leading individuals, organizations, and agencies.

   3. In the absence of any demonstable relationship to priorities expressed by government officials or other national figures, develop the argument that the selected problem area is nonetheless significant and merits support.

4. Discuss the likelihood that the work will continue to be significant in the future, even if priorities shift.

5. Discuss the significance in social and economic terms, as well as from an educational point of view.

II. Management

A. Supply evidence that the required institutional arrangements can be consummated; e.g., that the proposed research and development enterprise can achieve incorporation or that it can receive support and cooperation from the host institution.

B. Outline the governing structure of the new institution, explaining the part staff members as well as any governing board or external advisory committees will play.

C. Describe how decision-making authority and responsibility will be allocated within the institution.

D. Present the institution's mechanism for refining its mission as it gains experience.

E. Attach copies of personnel policies developed for the institution.

F. Describe the budgeting process established for the institution.

III. Personnel

A. Specify the roles of staff members at all levels, giving brief job descriptions for major positions.

B. Explain how staff qualifications are relevant to conducting the proposed mission and programs. Demonstrate how staff experiences are sufficient in variety and comprehensiveness.

C. List the names and provide biographical data for the key personnel who will work in the proposed institution when it is funded.

D. Supply evidence that persons engaged in the planning who will continue as permanent staff members, understand the plan, agree with it, and are committed to carrying it out.

E. Describe the sources that will provide a continuing supply of regular personnel as well as consultants.

IV. Planning and Evaluation System

A. Project the means to assess and modify institutional goals on a continual basis as the programs begin to have impact on the problem basis.

B. Project procedures to identify and assess alternative strategies for achieving the goals.

C. Project procedures to monitor and assess activities at the operational level.

D. Project methods to determine the extent to which institutional objectives are being achieved.

E. Project means to draw expertise from a variety of disciplines as needed in developing program plans.

F. Project procedures to relate budgets to programs.

V. Program Coordination and Balance

A. Identify the method to be used to coordinate and interrelate programs so that they are mutually reinforcing; if possible, provide for cumulative results.

B. Develop a plan that demonstrates a reasonable balance in allocating resources between activities that accomplish organizationally defined objectives and exploratory projects that involve high risk but promise high payoff.

C. Demonstrate that the proposed balance between research and development is in keeping with the mission of the institution and the state of knowledge in the field.

VI. Research Activities

A. Specify research objectives.

B. Demonstrate that the research objectives are relevant both to the development objectives and to the overall goals of the institution.

C. Describe proposed research designs, giving evidence of their scientific adequacy.

D. Explain how the institution will draw information both from related research efforts and from the existing literature.

VII. Development Activities

A. Specify development objectives.

B. Demonstrate that these objectives are relevant both to research objectives and to overall goals.

C. Set forth a development process and justify its choice.

D. Outline the procedures and the timetable to accomplish objectives.

E. Indicate how unavailable, specialized development capabilities will be acquired, e.g., through consulting arrangements, subcontracts, or other means.

VIII. Relations with Other Institutions, Agencies, and Organizations

A. Indicate what arrangements will be made to obtain formal sponsorship from or affiliation with existing institutions, agencies, or organizations.

B. Describe any collaborative relationships with outside organizations that will enhance the work of the proposed institution.

C. Describe the assistance available from existing institutions that will help start the new enterprise.

D. Explain what services other agencies will need to provide. Give evidence to certify their availability.

IX. Schedule

A. Specify starting points, milestone points, and ending points for all major activities to be undertaken in creating the institutional framework, including the recruitment of staff and acquisition of physical facilities.

B. Specify the starting points, milestone points, and ending points for all programs and all program components.

X. Facilities

A. Describe the housing available for the institution while it is getting started.

B. Describe the facilities being suggested for long-term housing of the institution.

C. Describe the criteria and procedures to be used to select a building site if construction is proposed.

XI. Financing

A. Supply a detailed budget for the institution.

1. Specify the costs of personnel, equipment and materials, special services, travel, communications, and space rental.

   2. Demonstrate that the proposed budget is directly related to, as well as sufficient to carry out, the proposed work.

   3. Identify those points in the budget that might be reduced without impeding progress of the program.

B. Describe the fiscal system to hold, disburse, and account for funds.

C. Describe other sources of support for the planning effort.

XII. Communications

A. Describe a plan for publicizing the institution that will make the nature of its work clear, demonstrate its significance, and arouse interest in its potential.

Decision 2

U.S. Office of Education
National Center for Educational Research and Development
Division of Research and Development Resources

Guidelines for Judges of New Institution Applications for New Research and Development Institutions in Education

Judges must assess the work statements of recipients of planning grants according to their standing on the criteria contained in the following set of questions. The questions are organized so that they parallel the sequencing the recipients were required to follow in writing their work statements. All questions must be answered.

The various sections of the statement will be evaluated according to the following system of weights:

	Section	Weight
I.	Mission or Problem Area	4
II.	Management	4
III.	Personnel	4
IV.	Planning and Evaluation System	3
V.	Program Coordination and Balance	1
VI.	Research Activities	2
VII.	Development Activities	2
VIII.	Relations with Other Institutions, Agencies, and Organizations	1
IX.	Schedule	3

X.	Facilities	1
XI.	Financing	2
XII.	Communication	1

Summary of Selected Information Contained in Original Application for Planning Grant

Recipients of planning grants were permitted to draw from the original planning grant proposal and summarize it briefly; as an alternative they could attach the proposal and indicate the location of the following information. In either case, recipients were to point out any changes made since the original application was filed.

1. Will the creation of the proposed institution make a distinct or unique contribution to research and development capability in education -- a capability not already available in existing institutions -- or will it significantly extend or improve what existing institutions can do?
    a. Does any distinction in mission or problem area set the proposed institution apart from others in its substantive program?
    b. Will the proposed institution play any distinct role in its geographic area?
2. Are there sources of funding in addition to the U.S. Office of Education that might assist either in establishing the institution or funding specific programs once the institution is established?
3. Can research and development activities deal satisfactorily with the problems, needs, or opportunities identified?
4. Does the relationship between the proposed work and what has been accomplished previously or is under way elsewhere justify founding a new institution?
5. Does the proposed mission or programs require long-range programmatic research and development in an institutional setting rather than through the support of single projects?
6. Is the design for identifying, examining, rating, and choosing among alternative procedures for carrying out the mission of the institution carefully worked out? Does it provide information sufficient to assure that alternatives will be thoroughly considered and final choices soundly made?
7. Will the proposed institution be easily accessible to both clients and outsiders?
    a. Will the geographic location enable the institution to cooperate with other organizations engaged in similar or related work?

b. Will the location enable the institution to attract and retain capable staff members?

8. Will formal sponsorhip by or affiliation with existing institutions, agencies, or organizations contribute to the success of the proposed institution?

9. Given its selected mission and program, is the proposed institution likely to achieve a mutually supportive relationship with outside agencies and groups?

New Tasks to be Performed

Although several of the following tasks may have been stated in the original application for a planning grant, a more elaborate and careful listing of them is expected from actual recipients. Quoting the original proposal is not sufficient for these tasks. The questions below contain the criteria on which proposals will be judged. All questions should be answered.

I. Mission or Problem Area

A. Do clearly identified problems, needs, or opportunities guide the institution in setting its mission?

B. Is the problem area outlined and the mission explained in terms specific enough to provide focus yet general enough to justify long-range programmatic work?

C. Are significant pupil populations, demographic areas, and economic settings singled out as targets for the proposed work?

D. Is there a sound, theoretical framework or rationale for the proposed work; or a persuasive review of relevant literature; or relevant and important background data; or a convincing accounting of a discrepancy between current conditions and desired conditions; or special characteristics of the geographic area that demand attention; or other evidence that the proposed mission should be performed?

E. Is the mission for the proposed institution necessary and significant?

F. Is the mission in keeping with generally accepted educational values?

G. Will the outcomes of the work be national as well as regional in impact?

H. Do the objectives specified for the institution, when taken as a whole, provide a coherent basis for the establishment of program plans?

I. Can research and development activities deal satisfactorily with the problems, needs, or opportunities identified?

J. Is the mission or problem area related to priorities in education?

1. Is it related to educational priorities recently expressed by the President; the Department of Health, Education, and Welfare; the U. S. Office of Education; the National Center for Educational Research and Development; or the Division of Research and Development Resources?

2. Is it related to educational priorities expressed by other leading individuals, organizations, and agencies?

3. In the absence of any demonstrable relationship to priorities expressed by government officials or other national figures, does it develop the argument that the selected problem area is nonetheless significant and merits support?

4. Will the work continue to be significant in the future, even if priorities shift?

5. Will achieving the proposed mission be significant in social and economic terms, as well as from an educational point of view?

II. Management

A. Is there adequate evidence that the required institutional arrangements can be consummated, e.g., that the proposed research and development enterprise can achieve incorporation or that it can receive support and cooperation from the host institution?

B. Will the governing structure of the new institution, including staff members as well as any governing board or external advisory committees, lead to effective and productive policy decisions?

C. Will the authority and responsibility allocated within the institution lead to timely and effective administrative decisions?

D. Will the institution introduce needed refinements into its mission as it gains experience?

E. Will the personnel policies developed for the institution contribute effectively to achieving the selected r & d mission?

F. Is the budgeting process established for the institution adequate?

III. Personnel

A. Is the staffing plan adequate?

B. Will staff qualifications match the needs of the institutional mission and proposed programs?

C. Does previous experience of the key personnel involved lead to confidence that the institution will succeed?

D. Do the planner and future staff members understand the plan? Are they in agreement with it and committed to carrying it out?

E. Is there an adequate pool of manpower for regular personnel appointments as well as for consultants?

IV. Planning and Evaluation System

A. Will the institution assess and modify its goals on a continual basis as its programs begin to have impact on the problem area?

B. Will alternative strategies for achieving the goals be identified and assessed?

C. Will activities at the operational level be monitored and assessed?

D. Will the institution determine the extent to which its objectives are being achieved?

E. Will expertise from a variety of relevant disciplines be employed as needed in developing program plans?

F. Will budgets and programs be related to each other effectively?

V. Program Coordination and Balance

A. Will program activities within the institution be mutually reinforcing and cumulative?

B. Will there be a reasonable balance between activities that accomplish organizationally defined objectives and those addressed to high-potential exploratory projects?

C. Will the balance between research and development be in keeping with the mission of the institution and the state of knowledge in the field?

VI. Research Activities

A. Are research objectives clearly specified?

B. Are the research objectives relevant both to the development objectives and to the overall goals of the institution?

C. Are the proposed research designs scientifically adequate?

D. Will the institution keep itself apprised of past and current research?

VII. Development Activities

A. Are development objectives clearly specified?

B. Are development objectives relevant both to research objectives and to the overall goals of the institution?

C. Is the development process adequate?

D. Are the procedures and the timetable for achieving the objectives realistic?

E. Will necessary specialized development capabilities not available within the institution be acquired?

VIII. Relations with Other Institutions, Agencies, and Organizations

A. Will sponsorship by or affiliation with existing institutions contribute to the success of the institution?

B. Will any collaborative relationships with outside organizations enhance the work of the proposed institution?

C. Will assistance be available from existing institutions to help start the new enterprise?

D. Will services required from other agencies be provided?

IX. Schedule

A. Is the timetable reasonable for creating the institutional framework, including the recruitment of staff and acquisition of physical facilities?

B. Is the timetable reasonable for carrying out the program?

X. Facilities

A. Will there be adequate housing available while the institution is getting started?

B. Will the facilities being suggested for proposed long-term housing of the institution be suitable?

C. Will acceptable criteria and procedures be used to select a building site if construction is proposed?

XI. Financing

A. Is the budget for the institution carefully prepared?

1. Is it complete?

2. Is it directly related to the proposed work as well as sufficient?

3. Is it limited to what is required?

B. Is the fiscal system complete and carefully devised?

C. Are other needed resources available to support the planning effort?

XII. Communications

A. Will the clients and audiences of the institution clearly understand the nature and significance of its work and be interested in its potential?

Decision 3

U. S. Office of Education
National Center for Educational Research and Development
Division of Research and Development Resources

Guidelines for Program Plans for Developing Research and Development Institutions Receiving Institutional Support from U. S. Office of Education

Research and development institutions preparing program plans for support by the U. S. Office of Education must follow the instructions below. They contain the criteria on which program plans will be judged; thus all information requested must be supplied.

The various sections of the proposal will be evaluated according to the following system of weighting.

	Section	Weight
I.	Institutional Mission, Capability, and Setting	4
II.	Program	4
III.	Management	4
IV.	Personnel	4
V.	Program Coordination and Balance	2
VI.	Research Activities	3
VII.	Development Activities	3
VIII.	Relations with Other Institutions, Agencies, and Organizations	2
IX.	Schedule	3
X.	Facilities	1
XI.	Financing	2
XII.	Communication	1

Summary of Selected Information Contained in Proposal for New Research and Development Institution

The following information may be drawn from the original proposal; as an alternative, the proposal may be attached and the location of the following information indicated. In either case, any changes made since the original application was filed must be indicated. It is expected that the Basic Program Plan will contain more elaborate information. For example, it is expected that the delineation of the problem area and mission of the institution will have been sharpened and clarified considerably during the writing of the Basic Program Plan.

I. Institutional Mission, Capability, and Setting

- A. Explain how the creation of the proposed institution will make a distinct or unique contribution to research and development capability in education -- a capability not already available in existing institutions -- or how it will significantly extend or improve what existing institutions can do.
    1. Describe the distinction in mission or problem area that will set the proposed institution apart in its substantive program.
    2. Describe any distinct role the proposed institution will play in its geographic area.
- B. Describe sources of funding besides the U. S. Office of Education that might assist either in establishing the institution or funding specific programs once the institution is established.
- C. Outline the problem area and explain the mission in terms specific enough to provide focus yet general enough to justify long-range programmatic work.
- D. Identify the pupil populations, demographic areas, and economic settings that are the targets of the proposed work.
- E. Relate the mission or problem area to priorities in education.

1. Describe the relationship to educational priorities recently expressed by the President; the Department of Health, Education, and Welfare; the U. S. Office of Education; the National Center for Educational Research and Development; or the Division of Research and Development Resources.

2. Describe the relationship to educational priorities expressed by other leading individuals, organizations, and agencies.

3. In the absence of any demonstrable relationship to priorities expressed by government officials or other national figures, develop the argument that the selected problem area is nonetheless significant and merits support.

4. Discuss the likelihood that the work will continue to be significant in the future, even if priorities shift.

5. Discuss the significance in social and economic terms, as well as from an educational point of view. Indicate whether the social and economic contributions are expected to be regional or national in eventual impact.

F. Justify the assertion that the problems, needs, or opportunities identified can be dealt with satisfactorily through research and development activities and cannot be approached better by another means.

G. Describe the relationship between the proposed work and what has been accomplished previously or is under way elsewhere.

H. Explain why the mission or programs of the institution require long-range programmatic research and development in an institutional setting and cannot be handled satisfactorily through the support of single projects.

I. Describe the procedures used for identifying, examining, rating, and choosing among alternative procedures that might have been used to carry out the mission of the institution. Include sufficient information to give assurance that the consideration of alternatives was thorough and that the final choices were sound.

J. Describe the geographic location of the proposed institution and its accessibility.

1. Discuss what the location implies for the ability of the institution to cooperate with other organizations engaged in similar or related work.

2. Discuss what the location implies for the ability of the institution to attract and retain capable staff members.

K. Indicate what formal sponsorship or affiliation the proposed institution will have with existing institutions, agencies, or organizations.

L. Describe, and if possible supply data on, the attitudes toward the proposed institution held by others who might ultimately impede its work or interfere with its accomplishments.

Additional Tasks to Be Performed

Although several of the following tasks may have been performed in writing the proposal for establishing the institution, more elaborate information is needed for the program plans. Quoting the original proposal is insufficient. Inasmuch as the instructions below contain the criteria on which proposals will be judged, all taks indicated must be carried out in writing the program plans.

II. Program

A. Present the configuration of mission/program/component/products so that their completeness and their internal consistency will be apparent.

1. Demonstrate that the products of the program are necessary for the institution to achieve its mission.

2. Demonstrate that programs are derived from the mission, that components constitute coherent programs, and that components will produce the anticipated products.

B. Specify defensible, clear, important objectives for the program.

1. Supply evidence to justify selection of the objectives and to demonstrate that they were chosen reasonably from among a set of alternatives.

2. State the objectives in operational terms, clearly specifying what the terminal product of each objective will be. For example, is the product to be new knowledge, some new form of educational practice, or new instructional materials?

3. Indicate the pupil populations, demographic areas, and economic settings to be affected by achievement of the objectives.

4. Demonstrate that the objectives strike a favorable balance between addressing critical needs and using available opportunities for meeting needs.

5. State whether achievement of the objectives is expected to make an incremental improvement, a sharp modification, or a complete change in the schools.

C. Specify defensible, clear, and relevant procedures for achieving the objectives.

1. Supply evidence to justify the selection of the procedures and to demonstrate that the choice among the available alternatives was reasonable.

2. State the procedures clearly in operational terms.

3. Show how the procedures are related to achieving the objectives.

4. Describe the mechanisms for evaluating the program processes and the products, and demonstrate their adequacy for self-correction and redirection.

III. Management

A. Supply evidence that the management has established and can make effective use of procedures for:

1. Planning and evaluation

2. Recruiting, assigning, training, evaluating, promoting, and compensating personnel

3. Monitoring detailed operations within all programs

4. Arranging for outside consulting and subcontract services

5. Performing housekeeping functions

6. Operating a fiscal system with adequate safeguards, records, and reports.

B. Supply evidence that personnel who have guided and directed the development of the program plans can provide effective leadership in carrying them out.

C. Provide an administrative organization chart for the institution and describe its relationship to the organization of the basic program.

IV. Personnel

A. Specify the roles of staff members at all levels, giving brief job descriptions for major positions.

B. Explain how staff qualifications are relevant to carrying out the proposed program. Demonstrate how staff experiences are sufficiently varied and comprehensive.

C. List the names and provide biographical data for the key staff personnel.

D. Supply evidence that persons who engaged in the planning and will continue as permanent staff members understand the plan, are in agreement with it, and are committed to carrying it out.

E. Describe the sources that will provide a continuing supply of regular personnel as well as consultants.

V. Program Coordination and Balance

A. Demonstrate that the proposed programs are mutually reinforcing and explain the degree to which they will be cumulative in their effect.

B. Demonstrate that there is a reasonable balance between activities that accomplish organizationally defined objectives and exploratory projects that involve high risk but promise high payoff.

C. Demonstrate that the proposed balance between research and development is in keeping with the mission of the institution and the state of knowledge in the field.

VI. Research Activities

A. Specify research objectives.

B. Demonstrate that the research objectives are relevant both to the development objectives and to the overall goals of the institution.

C. Describe proposed research designs, giving evidence of their scientific adequacy.

D. Explain how the institution will draw information both from related research efforts and from the existing literature.

VII. Development Activities

A. Specify development objectives.

B. Demonstrate that these objectives are relevant both to research objectives and to overall goals.

C. Set forth a development process and justify its choice.

D. Outline the procedures and the timetable to accomplish the objectives.

E. Indicate how specialized development capabilities not available within the institution will be acquired, e.g., through consulting arrangements or subcontracts.

VIII. Relations with Other Institutions, Agencies, and Organizations

A. Describe any collaborative relationships with schools, colleges, state departments of education, research and development organizations, ESEA Title I and Title III projects, or other federal programs. Explain how these relationships will assist the institution in achieving its objectives.

B. Explain what services other agencies will need to provide. Give evidence to certify their availability.

IX. Schedule

A. Specify the starting points, milestone points, and ending points for all programs and all program components.

B. Identify the points at which recycling of activity can correct unsatisfactory outcomes.

C. Identify the possibilities for accelerating or decelerating the tempo in case of changes in personnel or financial support.

X. Facilities

A. Describe the equipment, materials, and physical facilities to be used in carrying out the program.

B. Demonstrate that these are appropriate, sufficient, and economical for the work.

XI. Financing

A. Supply a detailed budget.

1. Specify the costs of personnel, equipment and materials, special services, travel, communications, and space rental.

2. Demonstrate that the proposed budget is related to the proposed work and is sufficient to carry it out.

3. Identify those points in the budget that might be reduced without impeding progress of the program.

B. Describe the fiscal system to hold, disburse, and account for funds.

C. Describe other resources available to support the planning effort.

XII. Communications

A. Describe a plan for publicizing the institution that will make the nature of its work clear, demonstrate its significance, and arouse interest in its potential.

B. Describe how this can be done so that it will increase the constituency for research and development activities in education.

Decision 3

U. S. Office of Education
National Center for Educational Research and Development
Division of Research and Development Resources

Guidelines for Judges of Program Plans for Developing Research and Development Institutions Receiving Institutional Support from U. S. Office of Education

Judges must assess the program plans according to their standing on the criteria contained in the following questions. The questions are organized so that they parallel the sequencing the planners followed in writing their program plans. All questions must be answered.

The various sections of the proposal will be evaluated according to the following system of weighting.

	Section	Weight
I.	Institutional Mission, Capability, and Setting	4
II.	Program	4
III.	Management	4
IV.	Personnel	4
V.	Program Coordination and Balance	2
VI.	Research Activities	3
VII.	Development Activities	3
VIII.	Relations with Other Institutions, Agencies, and Organizations	2
IX.	Schedule	3
X.	Facilities	1
XI.	Financing	2
XII.	Communication	1

Summary of Selected Information Contained in Proposal for New Research and Development Institution

Planners were permitted to draw from the original proposal, or to attach the proposal and indicate the location of the following information. In either case, planners were to point out any changes made since the original proposal was filed.

I. Institutional Mission, Capability, and Setting

A. Will the creation of the proposed institution make a distinct or unique contribution to research and development capability in education -- a capability not already available in existing institutions -- or will it significantly extend or improve what existing institutions can do?

1. Does any distinction in mission or problem area set the proposed institution apart from others in its substantive program?

2. Will the proposed institution play any distinct role in its geographic area?

B. Are there sources of funding besides the U. S. Office of Education that might assist either in establishing the institution or funding specific programs once the institution is established?

C. Is the problem area outlined and the mission explained in terms specific enough to provide focus yet general enough to justify long-range programmatic work?

D. Are significant pupil populations, demographic areas, and economic settings singled out as targets for the proposed work?

E. Is the mission or problem area related to priorities in education?

1. Is it related to educational priorities recently expressed by the President; the Department of Health, Education, and Welfare; the U. S. Office of Education; the National Center for Educational Research and Development; or the Division of Research and Development Resources?

2. Is it related to educational priorities expressed by other leading individuals, organizations, and agencies?

3. In the absence of any demonstrable relationship to priorities expressed by government officials or other national figures, does it develop the argument that the selected problem area is nonetheless significant and merits support?

4. Will the work continue to be significant even if priorities shift?

5. Will achieving the proposed mission be significant in social and economic terms, as well as from an educational point of view?

F. Are research and development activities the best means of dealing with the problems, needs, or opportunities identified?

G. Does the relationship between the proposed work and what has been accomplished previously or is under way elsewhere justify supporting this program?

H. Do the proposed mission or programs require long-range programmatic research and development in an institutional setting rather than through the support of single projects?

I. Is the design for identifying, examining, rating, and choosing among alternative procedures for carrying out the mission of the institution carefully worked out? Does it provide information sufficient to assure that alternatives will be thoroughly considered and final choices soundly made?

J. Will the proposed institution be easily accessible to both clients and outsiders?

1. Will the geographic location enable the institution to cooperate with other organizations engaged in similar or related work?

2. Will the location enable the institution to attract and retain capable staff members?

K. Will formal sponsorship by or affiliation with existing institutions, agencies, or organizations contribute to the success of the proposed institution?

L. Given its selected mission and program, is the proposed institution likely to achieve a mutually supportive relationship with outside agencies?

Additional Tasks to Be Performed

Although several of the following tasks may have been performed in writing the proposal for establishing the institution, more elaborate information is needed for the program plans. Quoting the original proposal is not sufficient. The questions below contain the criteria on which proposals will be judged. All questions must be answered.

II. Program

A. Is the configuration of mission/program/components/ products both complete and internally consistent?

1. Will the institution advance its mission if it completes the projected products?

2. Does the proposed configuration of parts constitute a consistent set of linked elements?

B. Are the objectives defensible, clear, and important?

1. Are the selected objectives the best choice from among the range of possible objectives?

2. Is the terminal product of each objective clearly specified?

3. Are the targets of the program -- pupil populations, demographic areas, and economic settings -- clearly specified?

4. Do the objectives strike a favorable balance between addressing critical needs and using available opportunities for meeting needs?

5. Is the expected outcome -- either an incremental improvement, a sharp modification, or a complete change in the schools -- the best choice of the three alternatives, given the nature of the problem?

C. Are the procedures for achieving the objectives defensible, clear, and relevant?

1. Are the selected procedures the best choice from among possible alternatives?

2. Are the procedures clearly stated in operational terms?

3. Are the procedures clearly related to achieving the objectives?

4. Will the selected evaluating mechanisms lead to effective self-correction and redirection of both the program processes and the products?

III. Management

A. Will management make effective use of procedures for:

   1. Planning and evaluation?

   2. Recruiting, assigning, training, evaluating, promoting, and compensating personnel?

   3. Monitoring detailed operations within all programs?

   4. Arranging for outside consulting and subcontract services?

   5. Performing housekeeping functions?

   6. Operating a fiscal system with adequate safeguards, records, and reports?

B. Will the personnel who have guided and directed the development of the program plans provide effective leadership in carrying them out?

C. Is the administrative organization of the institution related effectively to the organization of the program?

IV. Personnel

A. Is the staffing plan adequate?

B. Do the qualifications of the staff match the needs of the program?

C. Does previous experience of the key personnel who have agreed to work when the program is funded lead to confidence that it will succeed?

D. Do the persons engaged in the planning who will continue as permanent staff members understand the plan? Are they in agreement with it and committed to carrying it out?

E. Is there an adequate pool of manpower for regular personnel appointments as well as for consultants?

V. Program Coordination and Balance

A. Will program activities within the institution be mutually reinforcing?

B. Will there be a reasonable balance between activities that accomplish organizationally defined objectives and those addressed to high-potential exploratory projects?

C. Will the balance between research and development be in keeping with the mission of the institution and the state of knowledge in the field?

VI. Research Activities

A. Are research objectives clearly specified?

B. Are research objectives relevant both to the development objectives and to the overall goals of the institution?

C. Are the proposed research designs scientifically adequate?

D. Will the institution keep itself apprised of past and current research?

VII. Development Activities

A. Are development objectives clearly specified?

B. Are development objectives relevant both to research objectives and to overall goals?

C. Is the development process adequate?

D. Are the procedures and timetable for achieving the objectives realistic?

E. Will necessary, specialized development capabilities not available within the institution be acquired?

VIII. Relations with Other Institutions, Agencies, and Organizations

A. Will any collaborative relationships with outside organizations enhance the work of the proposed institution?

B. Will services required from other agencies be provided?

IX. Schedule

A. Is the timetable for carrying out the program reasonable?

B. Do the points identified for recycling of activity come early enough to correct unsatisfactory outcomes at reasonable cost?

C. Does the schedule provide genuine possibilities for accelerating or decelerating the tempo in case of changes in personnel or financial support?

X. Facilities

A. Are the equipment, materials, and physical facilities to be used in carrying out the program adequate?

B. Are they appropriate, sufficient, and economical for the work?

XI. Financing

A. Is the budget for the institution carefully prepared?

1. Is it complete?

2. Is it directly related to the proposed work as well as sufficient?

3. Is it limited to what is required?

B. Is the fiscal system complete and carefully devised?

C. Are other resources available to support the planning effort?

XII. Communications

A. Are the clients and audiences of the institution likely to become aware of its significance and develop interest in its potential?

B. Will the proposed plan lead to an increased constituency for research and development activites in education?

Decision 4

U. S. Office of Education
National Center for Educational Research and Development
Division of Research and Development Resources

Guidelines for Mature Status Application for Developing Research and Development Institutions Receiving Institutional Support from U. S. Office of Education

Research and development institutions preparing for a terminal review at the end of their period of core support as developing institutions must prepare documents in accordance with the instructions below. Those instructions contain the criteria on which the maturity of developing institutions will be judged; thus all information requested must be supplied.

The major sections of the documents will be evaluated according to the following system of weighting.

	Section	Weight
I.	Program	5
II.	Management	5
III.	Personnel	3
IV.	Planning and Evaluation System	3
V.	Relations with Other Institutions, Agencies, and Organizations	2
VI.	Facilities	2
VII.	Financing	2
VIII.	Communication	1

I. Program

A. Present the configuration of mission/program/components/products so that both their completeness and their internal consistency will be apparent.

1. Demonstrate that the products of the program are necessary for the institution to achieve its mission.

2. Demonstrate that programs are derived from the mission, that components constitute coherent programs, and that components will produce the anticipated products.

B. Give evidence to prove that the program plan, which the institution was funded to carry out, has been brought into full operation.

C. Supply evidence to show that program components have been achieving intermediate program objectives.

D. Describe any refinement, revision, or extension of program plans as a result of the experience in carrying out the program plan. Supply the data on which the modification decisions were based.

E. Describe the efforts of the institution to secure additional funding beyond what the U. S. Office of Education has supplied and discuss the relationship of the activities proposed for outside funding to the mission of the institution.

II. Management

A. Supply detailed evidence that the management has established and can make effective use of procedures for:

1. Planning and evaluation

2. Recruiting, assigning, training, evaluating, promoting, and compensating personnel

3. Monitoring detailed operations within all programs

4. Executing a plan as outlined and according to schedule

5. Producing documents that are brief, clear, cohesive, and revealing

6. Supplying technical-support services for the program staff

    a. Providing audio-visual design and production services

    b. Providing data-processing support that is competent, accessible, speedy, and produces reports in convenient formats

7. Arranging for outside consulting and subcontract services

8. Performing housekeeping functions

9. Operating a fiscal system in which the elements correspond to program components and which contains adequate safeguards, maintains detailed records, and produces accurate reports

B. Outline the governing structure of the institution, explaining the part staff members as well as any governing board or external advisory committees play.

C. Provide an administrative organization chart for the institution and describe its relationship to the organization of the basic program.

D. Describe how decision-making authority and responsibility are allocated within the institution.

III. Personnel

A. List the names and provide biographical data for professional personnel who have been employed.

B. Specify the roles of professional staff members at all levels, giving brief job descriptions for major positions.

C. Explain how the qualifications of the staff are relevant to the program in operation. Demonstrate that staff training and experience are sufficient to operate the program as planned.

D. Supply evidence that the staff members understand the program in operation, are in agreement with it, and are committed to carrying it out.

E. Describe the sources that will provide a continuing supply of regular personnel as well as consultants.

IV. Planning and Evaluation System

- A. Describe the planning procedures used to project activities for the institution.
    1. Illustrate how these procedures have been used to identify and assess alternative activities for achieving a particular goal.
    2. Illustrate how reports received by the planning unit have caused it to modify program plans.
- B. Describe the evaluation mechanism used by the institution.
    1. Give examples of how internal or external program reviews have been conducted.
    2. Give examples of process evaluation performed by the evaluation unit.
    3. Give examples of product evaluation performed by the evaluation unit.
    4. Illustrate how reports of process or product evaluations have led to refined operations or improved products.

V. Relations with Other Institutions, Agencies, and Organizations

- A. Describe any formal sponsorship from or affiliation with other institutions, agencies, or organizations.
- B. Describe any collaborative relationships with outside organizations.
- C. Describe the services purchased from outside agencies and explain their relationship to the requirements of the program.

VI. Facilities

- A. Describe the equipment, materials, and physical facilities being used in carrying out the program.
- B. Demonstrate that these are appropriate, sufficient, and economical for the work.

VII. Financing

A. Describe in full detail the fiscal system used to hold, disburse, account for, and report on funds.

B. Explain in detail the relationship of the fiscal system to the institutional program and demonstrate its usefulness to program personnel as well as to management.

C. Display evidence that the institution is willing and able to allocate all institutional expenses to programs and has a satisfactory method for accomplishing this.

D. Describe funding sources in addition to the U. S. Office of Education that might be able to support specific programs in the future.

VIII. Communications

A. Give evidence that the institution has been publicized in such a way that the nature of its work has become clear and is regarded by outsiders as significant.

B. Demonstrate that the institution is increasing the constituency for research and development activities in education.

Decision 4

U. S. Office of Education
National Center for Educational Research and Development
Division of Research and Development Resources

Guidelines for Judges of Mature Status Applications for Developing Research and Development Institutions Receiving Institutional Support from U. S. Office of Education

Judges must assess applications for mature status according to their standing on the criteria contained in the following set of questions. The questions are organized to parallel the sequencing the applicants followed in writing their proposals. All questions must be answered.

The various sections of the applications will be evaluated according to the following system of weighting.

	Section	Weight
I.	Program	5
II.	Management	5
III.	Personnel	3
IV.	Program Planning and Evaluation	3
V.	Relations with Other Institutions, Agencies, and Organizations	2
VI.	Facilities	2
VII.	Financing	2
VIII.	Communication	1

I. Program

A. Is the configuration of mission/program/components/products both complete and internally consistent?

1. Will the institution achieve its mission if it completes the projected products?

2. Does the proposed configuration of parts constitute a consistent set of linked elements?

B. Has the program plan that the institution was funded to carry out been brought into full operation?

C. Are program components achieving intermediate program objectives?

D. Is the program plan being refined, revised, or extended as a result of the experience in carrying it out? Have the modifications been based on data?

E. Will the institution be able to secure additional funding beyond what the U. S. Office of Education supplies? Will these funds advance its mission?

II. Management

A. Has the management established and will it make effective use of procedures for:

1. Planning and evaluation?

2. Recruiting, assigning, training, evaluating, promoting, and compensating personnel?

3. Monitoring detailed operations within all programs?

4. Executing a plan as outlined and according to schedule?

5. Producing documents that are brief, clear, revealing, and cohesive?

6. Supplying technical-support services for the program staff?

a. Providing audio-visual design and production services?

b. Providing data-processing support that is competent, accessible, speedy, and produces reports in convenient formats?

7. Arranging for outside consulting and subcontract services?

8. Performing housekeeping functions?

9. Operating a fiscal system in which the elements correspond to program components and which contains adequate safeguards, maintains detailed records, and produces accurate reports.

B. Is the governing structure of the institution well designed, including the way that staff members as well as any governing board or external advisory committees are placed in it?

C. Is the admininstrative organization of the institution closely related to the organization of the basic program?

D. Are decision-making authority and responsibility allocated effectively within the institution?

III. Personnel

A. Do the competence and experience of the professional personnel who have been employed clearly predict success for the institution and its programs?

B. Is the staffing plan adequate?

C. Do the training and experience of the staff match the needs of the program in operation?

D. Do the staff members understand the program in operation? Are they in agreement with it and committed to carrying it out?

E. Is there an adequate pool of manpower for both regular personnel as well as consultants?

IV. Planning and Evaluation System

A. Are the planning procedures used to project activities for the institution adequate?

1. Are these procedures used to identify and assess alternative activities for achieving a particular goal?

2. Have the reports received by the planning units caused any modification of its plans?

B. Is the evaluation mechanism used by the institution adequate?

  1. Are the internal or external reviews conducted in an effective manner by qualified persons?
  2. Does the institution evaluate its ongoing work?
  3. Does the institution determine the extent to which its objectives are being achieved?
  4. Does feedback from evaluations of ongoing work or products lead to refined operations or improved products?

V. Relations with Other Institutions, Agencies, and Organizations

A. Does any formal sponsorship from or affiliation with other institutions, agencies, or organizations contribute to the success of the institution?

B. Do any collaborative relationships with outside organizations enhance the work of the institution?

C. Are required services that must be purchased from outside agencies being provided?

VI. Facilities

A. Are there adequate equipment, materials, and physical facilities to carry out the program?

B. Are they being used effectively and economically?

VII. Financing

A. Is the fiscal system used to hold, disburse, account for, and report on funds adequate?

B. Is the fiscal system closely related to the institutional program? Is it easy to use and helpful to program personnel?

C. Is the institution willing and able to allocate all institutional expenses to programs and does it have a satisfactory method for accomplishing this?

D. Are there sources in addition to the U. S. Office of Education that might be able to assist in funding specific programs in the future?

VIII. Communications

A. Do the clients and audiences of the institution understand clearly the nature of its work and regard it as significant?

B. Is the work of the institution increasing the constituency for research and development activities in education?

Decision 5

U. S. Office of Education
National Center for Educational Research and Development
Division of Research and Development Resources

Guidelines for Program Development Grant Applications from Mature Research and Development Institutions in Education

Only mature research and development institutions are invited to apply for Program Development Grants. Institutions that have not been designated as "mature" by the Division of Research and Development Resources may request a maturity review.

Applications must contain the information called for in the instructions below. The instructions contain the criteria on which proposals will be judged; thus all information requested must be supplied.

The various sections of the proposal will be evaluated according to the following system of weighting.

	Section	Weight
I.	Problem Area	5
II.	Work Plan	3
III.	Personnel	5
IV.	Financing	2

I. Problem Area

A. Clearly specify the problems, needs, or opportinities that the proposed program will address.

B. State the objectives of the planning grant in operational terms.

C. Describe the pupil populations, demographic areas, and economic settings that are the targets of the proposed work.

D. Discuss the theoretical framework or rationale for the proposed work; or supply a review of relevant literature; or provide background data; or describe the discrepancy between current conditions and desired conditions; or cite special characteristics of the geographic area; or otherwise support the view that the objectives of the planning grant need to be accomplished.

E. Indicate whether the outcomes of the program will be national as well as regional in eventual impact.

F. Explain how research and development activities will satisfactorily deal with the problems, needs, or opportinities identified.

G. Explain why the problem requires long-range programmatic research and development in an institutional setting and cannot be handled satisfactorily through the support of single projects.

H. Describe the relationship between the proposed work and what has been accomplished previously or is under way elsewhere.

I. Relate the problem area to priorities in education.

   1. Describe the relationship to educational priorities recently expressed by the President; the Department of Health, Education, and Welfare; the U. S. Office of Education; the National Center for Educational Research and Development; or the Division of Research and Development Resources.

   2. Describe the relationship to educational priorities expressed by other leading individuals, organizations, and agencies.

3. In the absence of any demonstrable relationship to priorities expressed by government officials or other national figures, develop the argument that the selected problem area is nonetheless significant and merits support.

4. Discuss the likelihood that the work will continue to be significant in the future, even if priorities shift.

5. Discuss the significance in social and economic terms, as well as from an educational point of view.

II. Work Plan

A. Specify in precise terms the scope of work to be performed.

B. List the critical questions that must be answered to achieve the objectives of the planning grant.

C. Identify the formal or informal planning techniques to be used.

D. Delineate the procedures for using evaluation techniques to assess and to guide the planning process.

E. Explain how the planners will divide the planning tasks among themselves.

1. Explain the method for allocating tasks.

2. Demonstrate that there will be a match between tasks assigned and competence to do them.

3. Display a schedule for the use of the planning personnel showing their availability to carry out tasks in a planned series and to finish the work on time.

F. Supply a complete schedule for the planning task.

1. Supply starting points, milestone points, and ending points for major segments of the work.

2. Justify the schedule, given the scope-of-work statement.

III. Personnel

A. Identify the person who will lead the planning effort.

1. Describe his competency for this task.

2. Indicate the amount of time he will devote to the work and the degree of responsibility he will accept.

B. Describe the organizational structure and the work pattern to be used by the planning group.

  1. Explain the use of teams, committees, or task groups, indicating how they will be led and interrelated.

  2. Indicate the amount of time and degree of involvement for each member of the planning group.

C. Characterize the personnel.

  1. Supply data to show that they have both competency and relevant experience.

  2. Discuss the kind and number of personnel needed to carry out each task. Demonstrate that a critical mass of talent is available.

D. List the classifications of personnel who will assist with the planning.

  1. Show that contributions from persons in the substantive disciplines will be made wherever relevant.

  2. Show that talent from technical fields such as planning, evaluation, and data processing is available.

  3. Show that sufficient specialty in both research and development is present within the planning group.

  4. Show that the ultimate clients of the institution, such as school systems, are represented among the planners.

  5. Show that key audiences for the work of the institution, such as members of state legislatures or key public figures, are involved in the planning.

IV. Financing

A. Supply a detailed budget for the planning effort.

  1. Specify the costs of personnel, equipment and materials, special services, travel, communications, and space rental.

  2. Demonstrate that the proposed budget is sufficient to carry out the scope of work.

  3. Identify those points at which the budget might be reduced without impeding the planning.

Decision 5

U. S. Office of Education
National Center for Educational Research and Development
Division of Research and Development Resources

Guidelines for Judges
of
Applications for Program Development Grants
from
Mature Research and Development Institutions in Education

Judges will assess applications for Program Development Grants according to their standing on the criteria contained in the following set of questions. The questions are organized to parallel the sequencing the applicants followed in writing their proposals. All questions must be answered.

The various sections of the applications will be evaluated according to the following system of weighting.

	Section	Weight
I.	Problem Area	5
II.	Work Plan	3
III.	Personnel	5
IV.	Financing	2

I. Problem Area

A. Do clearly identified problems, needs, or opportunities guide the institution in formulating the proposed program?

B. Are the objectives of the planning grant stated in operational terms?

C. Are significant pupil populations, demographic areas, and economic settings singled out as targets of the proposed program?

D. Is there a sound theoretical framework or rationale for the proposed work; or a persuasive review of relevant literature; or relevant and important background data; or a convincing accounting of a discrepancy between current conditions and desired conditions; or special characteristics of the geographic area that demand attention; or other evidence that the objectives of the planning grant need to be accomplished?

E. Can the outcomes of the program be national as well as regional in eventual impact?

F. Can the research and development activities deal satisfactorily with the problems, needs, or opportunities identified?

G. Does the problem require long-range programmatic research and development in an institutional setting rather than the support of single projects?

H. Does the proposed work build on without duplicating what has previously been accomplished or is under way elsewhere?

I. Is the mission or problem area related to priorities in education?

1. Is it related to educational priorities recently expressed by the President; the Department of Health, Education, and Welfare; the U.S. Office of Education; the National Center for Educational Research and Development; or the Division of Research and Development Resources?

2. Is it related to educational priorities expressed by other leading individuals, organizations, and agencies?

3. In the absence of any demonstrable relationship to priorities expressed by government officials or other national figures, does it develop the argument that the selected problem area is nonetheless significant and merits support?

4. Will the work continue to be significant in the future, even if priorities shift?

5. Will achieving the proposed mission be significant in social and economic terms, as well as from an educational point of view?

II. Work Plan

A. Is the scope of work specified in precise terms?

B. Are the questions to be answered critical to achieving the objectives of the planning grant?

C. Will the proposed formal or informal planning techniques lead to successful completion of the scope of work?

D. Will the proposed evaluation techniques effectively assess and guide the planning process?

E. Will the best possible division of tasks among the planning personnel be effected?

1. Will the method for allocating the tasks work out in actual practice?

2. Is there a close match between tasks assigned and competence to do them?

3. Will the planning personnel carry out their tasks in a planned series and finish the work on time?

F. Is the schedule for the planning tasks balanced and complete?

1. Does it supply precise starting points, milestone points, and ending points for major segments of the work?

2. Is the schedule closely related to the scope-of-work statement?

III. Personnel

A. Will the person who will lead the planning effort be effective?

1. Is he competent for this task?

2. Will he give enough time to and take enough responsibility for the work?

B. Are the organizational structure and the work pattern to be used by the planning group appropriate for the task?

1. Will the best possible use be made of the proposed work groups?

2. Will the amount of time and degree of involvement for each member of the planning group be adequate to the task?

C. Are the personnel properly selected for the work?

1. Will the personal competence and relevant experience of each lead to successful completion of the planning effort?

2. Will a critical mass of specified talents be available?

D. Will an adequate range of personnel assist with the planning?

1. Will contributions from persons in the substantive disciplines be made wherever relevant?

2. Will talent from technical fields such as planning, evaluation, and data processing be available?

3. Will sufficient specialty in both research and development be present within the planning group?

4. Will the ultimate clients of the institution, such as school systems, be represented among the planners?

5. Will key audiences for the work of the institution, such as members of state legislatures or key public figures, be involved in the planning?

IV. Financing

A. Is the budget for the planning effort carefully prepared?

1. Is it complete?

2. Is it sufficient?

s. Is it limited to what is required?

Decision 6

U. S. Office of Education
National Center for Educational Research and Development
Division of Research and Development Resources

Guidelines for Program Plan for Mature Research and Development Institutions in Education

Only mature research and development institutions are invited to apply for program support. Institutions that have not been designated as "mature" by the Division of Research and Development Resources may request a maturity review.

Applications must contain the information called for in the instructions below. The instructions contain the criteria on which proposals will be judged; thus all information requested must be supplied.

The various sections of the proposal will be evaluated according to the following system of weighting.

	Section	Weight
I.	Relation of Program to Previous Work of the Institution	3
II.	Problem	5
III.	Program	5
IV.	Personnel	5
V.	Planning and Evaluation System	3
VI.	Relations with Other Institutions, Agencies, and Organizations	2
VII.	Schedule	5

	Section	Weight
VIII.	Facilities	3
IX.	Financing	3
X.	Communication	2
XI.	Product Dissemination Plan	1
XII.	Contribution to Training	1

I. Relation of Program to Previous Work of the Institution

   A. Describe the previous work of the institution in the proposed program area or in a closely related program area.

   B. State explicitly how this previous institutional experience can be used to enhance the performance of the the proposed work.

   C. Supply specific information about the schedule and costs of related previous work that will authenticate the schedule and costs for the proposed work.

II. Problem

   A. Clearly specify the problem, need, or opportunity that the proposed program will address.

   B. Delineate the problem area and explain it in terms specific enough to provide focus yet general enough to justify long-range programmatic work.

   C. Describe the pupil populations, demographic areas, and economic settings that are the targets of the proposed work.

   D. Authenticate the problem, need, or opportunity by presenting a theoretical framework or rationale for the proposed work; or supply a thorough review of relevant literature; or delineate the discrepancy between current conditions and the desired conditions; or cite special characteristics of the goegraphic area or otherwise establish conclusively that the proposed program should be carried out.

   E. Indicate whether the outcomes of the program will be national as well as regional in eventual impact.

   F. Justify the assertion that research and development activities will satisfactorily deal with the problem, need, or opportunity identified.

   G. Explain why the problem requires long-range programmatic research and development in an institutional setting and cannot be handled satisfactorily through the support of single projects.

   H. Describe the relationship between the proposed work and what has been accomplished previously or is under way elsewhere.

   I. Explain how the mission is in keeping with generally accepted educational values.

J. Relate the problem area to priorities in education.

  1. Describe the relationship to educational priorities recently expressed by the President; the Department of Health, Education, and Welfare; the U. S. Office of Educational; the National Center for Educational Research and Development; or the Division of Research and Development Resources.

  2. Describe the relationship to educational priorities expressed by other leading individuals, organizations, and agencies.

  3. In the absence of any demonstrable relationship to priorities expressed by government officials or other national figures, develop the argument that the selected problem area is nonetheless significant and merits support.

  4. Discuss the likelihood that the work will continue to be significant in the future, even if national priorities shift.

  5. Discuss the significance in social and economic terms, as well as from an educational point of view.

III. Program

A. Specify defensible, clear, important objectives for the program.

  1. Supply evidence to justify selection of the objectives and to demonstrate that they were chosen reasonably from among a set of alternatives.

  2. State the objectives in operational terms, clearly specifying what the terminal product of each objective will be. For example, is the product to be new knowledge, some new form of educational practice, or new instructional materials?

  3. Indicate the pupil populations, demographic areas, and economic settings to be affected by achievement of the objectives.

  4. Demonstrate that the objectives strike a favorable balance between addressing critical needs and using available opportunities for meeting needs.

  5. State whether achievement of the objectives is expected to make an incremental improvement, a sharp modification, or a complete change in the schools.

B. Specify defensible, clear, and relevant procedures for achieving the objectives.

  1. Supply evidence to justify the selection of the procedures and to demonstrate that the choice among the available alternatives was reasonable.

  2. State the procedures clearly in operational terms.

  3. Show how the procedures are related directly to achieving the objectives.

  4. Describe the mechanisms for evaluating both the program processes and the products and demonstrate their adequacy for self-correction and redirection.

IV. Personnel

A. Specify the roles of staff members at all levels, giving brief job descriptions for major positions.

B. Explain how the qualifications of the staff are relevant to carrying out the proposed work. Demonstrate how staff experiences are sufficient in variety and comprehensiveness.

  1. Show that contributions from persons in the substantive disciplines will be made wherever relevant.

  2. Show that talent from technical fields such as planning, evaluation, and data processing is available.

  3. Show that sufficient specialty in both research and development is present within the staff.

C. List the names and provide biographical data for the key personnel who have agreed to work in the program when it is funded.

D. Supply evidence that persons who have been engaged in the planning and will continue as permanent staff members understand the plan, are in agreement with it, and are committed to carrying it out.

E. Describe the sources that will provide a continuing supply of regular personnel as well as consultants.

V. Planning and Evaluation System

A. Describe the procedures that will be used to monitor and assess activities at the operational level.

   1. Describe the content and format of reports that will be supplied to program people to guide their work.

   2. Supply the schedule on which these reports will be provided.

B. Describe the methods that will be used to determine the extent to which program objectives are being achieved.

C. Give a complete description of the method that will be used to conduct milestone reviews at key points throughout the program.

   1. Describe the internal review procedure that will be used by program personnel or others within the institution.

   2. Describe the external review procedure that will be used involving personnel from outside the institution. (External milestone reviews are required for all funded programs.)

   3. Describe the format and schedule for transmitting the results of these milestone reviews to the Division of Research and Development Resources in the U. S. Office of Education. (The schedule must be in sufficient detail to allow close monitoring by the Office of Education.)

D. Describe the nature of the final report that will be transmitted to DRDR at the conclusion of the program and the date for transmitting it. (Final reports are required for all funded programs.)

VI. Relations with Other Institution, Agencies, and Organizations

A. Describe any collaborative relationships with schools, colleges, state departments of education, research and development organizations, ESEA Title I and Title III projects, or other federal programs. Explain how these relationships will assist the program in achieving its objectives.

B. Indicate how specialized capabilities not available within the institution will be acquired, e.g., through consulting arrangements or subcontracts.

C. Describe and, if possible, supply data on the attitudes held by others who might impede the progress of the program or ultimately interfere with its accomplishments.

VII. Schedule

- A. Specify the starting points, milestone points, and ending points for all programs and all program components.
- B. Identify the points at which recycling of activities can correct unsatisfactory outcomes.
- C. Identify the possibilities for accelerating or decelerating the tempo in case of changes in personnel or financial support.

VIII. Facilities

- A. Describe the equipment, materials, and physical facilities to be used in carrying out the program.
- B. Demonstrate that these are appropriate, sufficient, and economical for the work.

IX. Financing

- A. Supply a detailed budget.
    - 1. Specify the costs of personnel, equipment and materials, special services, travel, communications, and space rental.
    - 2. Demonstrate that the proposed budget is directly related to as well as sufficient to carry out the proposed work.
    - 3. Identify those points in the budget that might be reduced without impeding the process of the program.
- B. Describe the fiscal system to hold, disburse, and account for funds.
- C. Describe other resources available to support the program.

X. Communications

- A. Describe a plan for publicizing the program that will make the nature of the work clear, demonstrate its significance, and arouse interest in its potential.
- B. Describe how this can be done so that it will increase the contituency for research and development activities in education.

XI. Product Dissemination Plan

A. Describe the plan for ultimately disseminating the products of the program should it prove successful.

B. List the possible funding sources that might support the dissemination effort.

XII. Contribution to Training

A. Indicate the number of professional personnel who will receive training in research and development if the program is funded.

B. Explain whether the training will be supplied in formal, scheduled sessions or will be supplied as informal, on-the-job training.

Decision 6

U. S. Office of Education
National Center for Educational Research and Development
Division of Research and Development Resources

Guidelines for Judges
of
Program Plans
from
Mature Research and Development Institutions in Education

Judges must assess the program plans according to their standing on the criteria contained in the following set of questions. The questions are organized to parallel the sequencing the planners followed in writing their program plans. All questions must be answered.

The various sections of the proposal will be evaluated according to the following system of weighting.

	Section	Weight
I.	Relation of Program to Previous Work of the Institution	3
II.	Problem	5
III.	Program	5
IV.	Personnel	5
V.	Planning and Evaluation System	3
VI.	Relations with Other Institutions, Agencies, and Organizations	2
VII.	Schedule	5

	Section	Weight
VIII.	Facilities	3
IX.	Financing	3
X.	Communication	2
XI.	Product Dissemination Plan	1
XII.	Contribution to Training	1

I. Relation of Program to Previous Work of the Institution

  A. Does the previous work of the institution in the proposed program area or in a closely related program area indicate that it can succeed with the proposed program?

  B. Can this previous institutional experience be used specifically to enhance the performance of the proposed work?

  C. Does the previous experience of the institution authenticate the schedule and costs for the proposed work?

II. Problem

  A. Do clearly identified problems, needs, or opportunities guide the institution in setting its mission?

  B. Is the problem area outlined and the mission explained in terms specific enough to provide focus yet general enough to justify long-range programmatic work?

  C. Are significant pupil populations, demographic areas, and economic settings singled out as targets for the proposed work?

  D. Is there a sound theoretical framework or rationale for the proposed work; or a persuasive review of relevant literature; or relevant and important background data; or a convincing accounting of a discrepancy between current conditions and desired conditions; or special characteristics of the geographic area that demand attention;or other evidence that the proposed mission should be performed?

  E. Will the outcomes of the work be national as well as regional in eventual impact?

  F. Can research and development activities deal satisfactorily with the problems, needs, or opportunities identified?

  G. Does the problem require long-range programmatic research and development in an institutional setting, or can it be solved through the support of single projects?

  H. Will the proposed work build appropriately on what has been accomplished previously or is underway elsewhere?

  I. Is the mission in keeping with generally accepted educational values?

  J. Is the mission or problem area related to priorities in education?

    1. Is it related to educational priorities recently expressed by the President; the Department of Health, Education, and Welfare; the U.S. Office of Education,

the National Center for Educational Research and Development; or the Division of Research and Development Resources?

2. Is it related to educational priorities expressed by other leading individuals, organizations, and agencies?

3. In the absence of any demonstrable relationship to priorities expressed by government officials or other national figures, is the selected problem area nonetheless significant enough to merit support?

4. Will the work continue to be significant even if national priorities shift?

5. Will achieving the proposed mission be significant in social and economic terms, as well as from an educational point of view?

III. Program

A. Are the objectives defensible, clear, and important?

1. Are the selected objectives the best choice from among the range of possible objectives?

2. Is the terminal product of each objective clearly specified?

3. Are the targets of the program--pupil populations, demographic areas, and economic settings--clearly specified?

4. Do the objectives strike a favorable balance between addressing critical needs and using available opportunities for meeting needs?

5. Is the expected outcome--either an incremental improvement, a sharp modification, or a complete change in the schools--the best choice of the three alternatives, given the nature of the problem.

B. Are the procedures for achieving the objectives defensible, clear, and relevant?

1. Are the selected procedures the best choice from among the range of possible alternatives?

2. Are the procedures clearly stated in operational terms?

3. Are the procedures clearly related to achieving the objectives?

4. Will the selected evaluating mechanisms lead to effective self-correction and redirection of both the program processes and the products?

IV. Personnel

A. Is the staffing plan adequate?

B. Do the qualifications of the staff match the needs of the program?

1. Are contributions from persons in the substantive disciplines made wherever relevant?

2. Is talent from technical fields such as planning, evaluation, and data processing used when needed?

3. Is sufficient specialty in both research and development present within the staff?

C. Does the previous experience of the key personnel who have agreed to work in the program when it is funded lead to confidence that the program will succeed?

D. Do the persons engaged in the planning, who will continue as permanent staff members, understand the plan? Are they in agreement with it and committed to carrying it out?

E. Is there an adequate pool of manpower for regular personnel appointments as well as for consultants?

V. Planning and Evaluation System

A. Will the procedures, which will be used to monitor and assess activites at the operational level, help the program personnel?

1. Will the content of the reports, which will be supplied to program people actually help to guide their work?

2. Will the schedule, on which these reports will be supplied, be useful to program personnel?

B. Are the methods satisfactory that will be used to determine the extent to which program objectives are being achieved?

C. Is the method adequate that will be used to conduct milestone reviews at key points throughout the program?

1. Is the internal review procedure adequate that will be used by program personnel or others within the institution?

2. Is the external review procedure adequate that will be used involving personnel from outside the institution?

3. Do the format and schedule for transmitting the results of these milestone reviews to the Division of Research and Development Resources in the U S Office of Education appear reasonable? (The schedule must be in sufficient detail to allow close monitoring by the Office of Education.)

D. Are the contents and date for submitting the final report sufficiently specified?

VI. Relations with Other Institutions. Agencies, and Organizations

A. Will any collaborative relationships with outside organizations assist the program in achieving its objectives?

B. Will specialized capabilities not available within the institution be acquired?

C. Are outsiders likely to impede the progress of the program or ultimately interfere with its accomplishments?

VII. Schedule

A. Are the starting points, milestone points, and ending points for all programs and all program components reasonable?

B. Are the points at which recycling of activity can correct unsatisfactory outcomes early enough to allow prompt correction of troubles that ocurr?

C. Do the possibilities for accelerating or decelerating the tempo in case of changes in personnel or financial support allow substantial flexibility?

VIII. Facilities

A. Are the equipment, materials, and physical facilities to be used in carrying out the program adequate?

B. Are they appropriate, sufficient, and economical for the work?

IX. Financing

- A. Is the budget carefully prepared?
    1. Is it complete?
    2. Is it sufficient?
    3. Is it limited to what is required?
- B. Is the fiscal system complete and carefully devised?
- C. Are other resources available to support the planning effort?

X. Communications

- A. Are the clients and audiences of the institution likely to become aware of its significance and develop interest in its potential?
- B. Will the proposed plan lead to an increased constituency for research and development activities in education?

XI. Product Dissemination Plan

- A. Is the plan for ultimately disseminating the products of the program reasonable?
- B. Are there possible funding sources that might support the dissemination effort?

XII. Contribution to Training

- A. Will a reasonable number of professional personnel receive training in research and development if the program is funded?
- B. Is the training to be supplied in formal, scheduled sessions or only as informal, on-the-job training?

Decision 7

U. S. Office of Education
National Center for Educational Research and Development
Division of Research and Development Resources

Milestone Review
DRDR Evaluation Unit Responsibilities

Program milestone reviews will be conducted by all mature research and development institutions receiving DRDR program support. All such institutions, when they applied for program support, filed milestone review plans with DRDR that contained a schedule for conducting the reviews and the date and format of the reviews for sending to DRDR.

Members of the DRDR evaluation staff will maintain a calendar of dates for receiving milestone reviews and will follow-up with any institution that fails to supply the review on the schedule promised.

When the milestone reviews are received by DRDR, the evaluation staff will examine them to see whether milestones were reached on time at a satisfactory level of quality. The findings of the milestone reviews will be summarized and reported to DRDR decision-makers, with an intervention review recommended if indicated by the findings. Moreover, they will be filed with the records of the research and development institution and used by the DRDR evaluation staff to inform DRDR decision-makers and program monitors when periodic funding decisions are being made.

Decision 8

U. S. Office of Education
National Center for Educational Research and Development
Division of Research and Development Resources

Intervention Review
DRDR Evaluation Unit Responsibilities

Ocassionally DRDR-supported research and development work in mature institutions will not proceed as expected. For example, milestone reviews will indicate unsatisfactory performance, research or development breakthroughs will occur that could have a major effect on the future of the program, key personnel will leave the institution, or reports from cooperating institutions will indicate that the work is not proceeding according to plan. When such occasions arise, intervention reviews may be requested by USOE.

Inasmuch as each intervention review is likely to call for ad hoc arrangements by the DRDR evaluation unit, general instructions cannot be written. However, it is likely that the guidelines and instruments used at other major decision points could be selected in some combination for an intervention review. And it may be necessary to eliminate certain sections from the guidelines and instruments or to develop supplementary instructions for reviewers. This will be the responsibility of the DRDR evaluation staff and any necessary outside experts.

Decision 9

U. S. Office of Education
National Center for Educational Research and Development
Division of Research and Development Resources

Program Outcome Review
DRDR Evaluation Unit Responsibilities

A detailed plan for program outcome evaluation is being prepared for DRDR under a contract issued by the Office of Program Planning and Evaluation.

The exact responsibilities of the DRDR evaluation unit for assessing program outcomes presumably will be determined jointly by NCERD and the Office of Program Planning and Evaluation. The latter is planning to retain responsibility for evaluating the impact of Office of Education programs. Thus, the outcomes of DRDR-supported r & d programs possibly, will be evaluated in whole or in part by OPPE.

Regardless of the outcomes of the above transactions, DRDR will need information about program outcomes to guide its future funding and dissemination decisions. Therefore, when the last milestone has been reached in any given program, the DRDR evaluation unit will employ three independent experts to examine the program's products and reports of final tests run on them. Then the experts will file independent reports giving DRDR their judgments as to the product's quality.

Decision 10

U. S. Office of Education
National Center for Educational Research and Development
Division of Research and Development Resources

Budget and Contract Review
DRDR Evaluation Unit Responsibilities

DRDR makes annual funding decisions for programs already in operation (those that pass decision point 6) and contracts for a specified scope of work in each program for the year ahead. DRDR's policy insures that programs will be funded during satisfactory performance until a prescheduled termination point is reached.

The DRDR evaluation staff usually will not be involved in these annual funding decisions. The evaluation unit's responsibilities to DRDR decision-makers for such occasions will be discharged partly by monitoring the milestone reviews conducted by mature institutions receiving continuing program support (decision point 7). Inasmuch as these milestone reviews occur at irregular times throughout the year for all the mature research and development institutions being supported by DRDR, the monitoring work of the evaluation unit cannot be scheduled to coincide with annual funding decisions. However, it is the responsibility of the evaluation unit to draw information about milestone reviews from the files and to supply it in an orderly fashion to DRDR decision-makers at the time of annual funding decisions. This is important because information on the success or failure of programs in reaching their milestones will influence funding decisions for the year ahead. Similarly, any information gathered by the DRDR evaluation staff during intervention reviews will be filed and drawn out and summarized at the time of annual funding decisions. The same thing will occur to information that becomes available to the DRDR evaluation staff during the assessment of program outcomes - whether it was conducted by the research and development institution, the DRDR evaluation staff, or by the OPPE staff.

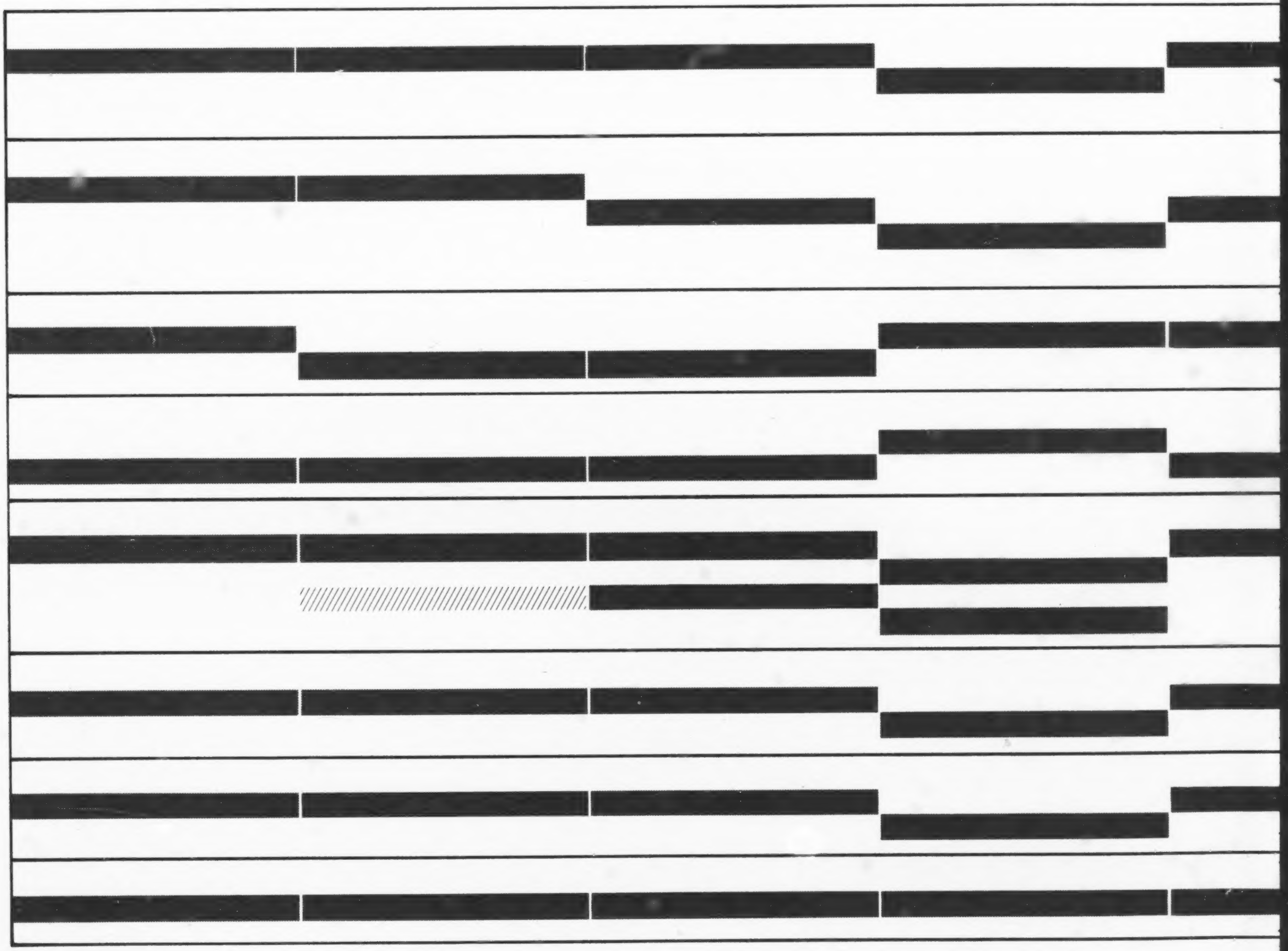
In short, the DRDR evaluation staff, at the time of annual funding decisions (decision point 10) will draw from the files any relevant data on the performance of the mature research and development institutions receiving program support and summarize this information for DRDR decision-makers.

Appendix B

Relationship Between Selected Evaluation Factors and Support-Policy Decisions

Rela

(1)	(2)	(3)	(4)	
Should the request for a planning grant for a new institution be funded?	Should a given proposal to start a new institution be funded?	Is the basic program plan of a given institution satisfactory?	Is the institution capability to manage its basic program plan satisfactory?	Should a developm for a ne be funde



■ always applicable

▨ applicable only when planning grant reports provide insufficient data

░ may or may not be required dependent upon overall funding constraints and the availability of pertinent information already on file

Relationship Between Selected Evaluation Factors and Support-Policy Decisions

tion man- pro- sfac-	(5) Should a given development grant for a new program be funded?	EVALUATION FACTORS	(6) Should the Office of Education commit itself to support a given proposed new program plan?	(7 Are signif milestones program pl ing reache time and w isfactory
		DECISION CONSEQUENCES		
	■	Allocation of Funds	■	
■		Certification as Mature Institution		
		Termination of Support		
		CRITERIA FOR JUDGING		
		New Institution		
	■	New Program	■	
■		Existing Institution		
		Existing Program		■
		SOURCES OF DATA		
■	■	Proposals		
		Progress and Final Reports	■	■
		FOCUS OF EVALUATION		
■		Single Program or Institution		■
	■	Multiple Programs or Institutions	■	
		PROCEDURE FOR JUDGMENT		
	■	Reading by 3 Judges		
■		Reading by 5 Judges	■	
		Site Visit by 3 Judges		
■		Site Visit by 5 Judges	■	
		TYPE OF ANALYSIS		
	■	Rank Order	■	
■		Individual		■
		RESPONSIBILITY FOR ANALYSIS		
	■	External Agency and DRDR Staff	■	
■		DRDR Staff Only		■
		EXTERNAL AUDIT		
■	■	Required on a sampling basis	■	■

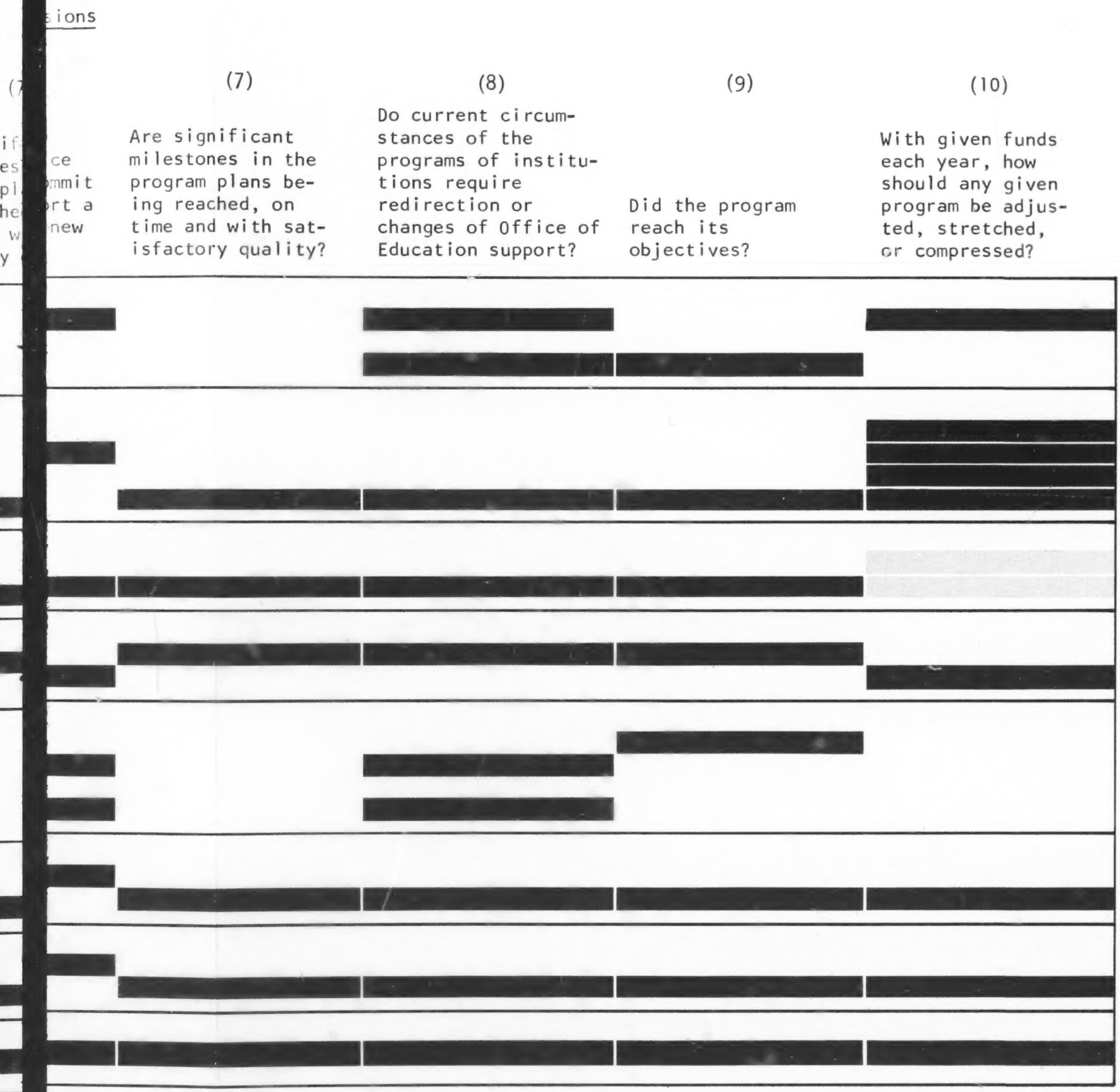


Chart showing
Relationship Between Selected Evaluation Factors and Support-Policy Decisions